

PROCESS AUTOMATION

My Control System - Data Collector User Manual



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About This User Manual

General

This user manual describes the data collection process using MCS-DC product on various ABB control systems.

Document Conventions

Microsoft Windows conventions are normally used for the standard presentation of material when entering text, key sequences, prompts, messages, menu items, screen elements, etc.

Warning, Caution, Information, and Tip Icons

This User Manual includes Warning, Caution, and Information where appropriate to point out safety related or other important information. It also includes Tip to point out useful hints to the reader. The different icon types found in this document are presented below:



Electrical warning icon indicates the presence of a hazard that could result in *electric shock.*



Warning icon indicates the presence of a hazard that could result in *personal injury*.



Caution icon indicates important information or warning related to the concept discussed in the text. It might indicate the presence of a hazard that could result in *corruption of software or damage to equipment/property*.



Information icon alerts the reader to pertinent facts and conditions.



Tip icon indicates advice on, for example, how to design your project or how to use a certain function.

Although Warning hazards are related to personal injury, and Caution hazards are associated with equipment or property damage, it must be understood that operation of damaged equipment could, under certain operational conditions, result in degraded process performance leading to personal injury or death. Therefore, fully comply with all Warning and Caution notices.

Network Security Disclaimer

This product is designed to be connected to and to communicate information and data via a network interface, it is your sole responsibility to provide and continuously ensure a secure connection between the product and to your network or any other network (as the case may be). You shall establish and maintain any appropriate measures (such as but not limited to the installation of firewalls, application of authentication measures, encryption of data, installation of anti-virus programs, etc) to protect the product, the network, its system and the interface against any kind of security breaches, unauthorized access, interference, intrusion, leakage and/or theft of data or information. ABB and its entities are not liable for damages and/or losses related to such security breaches, any unauthorized access, interference, intrusion, leakage and/or theft of data or information.

Terminology

A complete and comprehensive list of Terms is included in System *800xA System Guide Functional Description (3BSE038018*)*. The listing includes terms and definitions that apply to the 800xA System where the usage is different from commonly accepted industry standard definitions and definitions given in standard dictionaries such as Webster's Dictionary of Computer Terms. Terms that uniquely apply to this instruction are listed in the following table.

Release Information

Before using MCS-DC it is highly recommended to read the End User License Agreement, the Release Notes and this User Manual. Should you need to report problems, always mention the version that you are using.

1 Introduction

My Control System - Data Collector (in the following referred to as MCS-DC) is used to collect Performance, Lifecycle, Software and Security data from ABB's major control systems: System 800xA, Freelance and Symphony Plus. A complete list of systems, system versions and system combinations is available in Table 1.

The collected data is bundled and encrypted into a file (.zip). This file shall be uploaded to My Control System (MCS) for further analysis and report generation, such as Benchmark report, Fingerprint report, etc. Additionally, the life cycle information on this collection file can be uploaded to ServIS from MCS by the local ABB installed base manager using SCX Tool for Installed Base Management, for the consolidation of installed base information on ServIS.

Download the latest version of MCS-DC from My Control System (MCS) portal or ABB library. Optionally, users can verify the authenticity of the downloaded package using its Hash value provided with the package. Refer Appendix E, SHA256 Hash verification for more details on Hash verification.

1.1 Scope and Software Versions

This User Manual describes data collection process for the various systems that are supported by this version of MCS-DC.

1.2 Supported Systems and Versions

Supported systems version for Data Collection are listed below.

Control System		Supported Major Versions		Supported Rollup Versions
Freelance	-	V8.1, V8.2	-	V9.2.01
	-	V9.1, V9.1 SP1	-	Freelance 2013 SP1 RU1,
	-	V9.2, V9.2 SP1, V9.2 SP2		Freelance 2013 SP1 RU2,
	-	Freelance 2013,		Freelance 2013 SP1 RU3,
		Freelance 2013 SP1		Freelance 2013 SP1 RU4
	-	Freelance 2016,		Freelance 2013 SP1 RU5
		Freelance 2016 SP1	-	Freelance 2016 SP1 RU1,
	-	Freelance 2019		Freelance 2016 SP1 RU2,
		Freelance 2019 SP1		Freelance 2016 SP1 RU3
	-	Freelance 2019 SP1 FP1		Freelance 2016 SP1 RU4,
				Freelance 2016 SP1 RU5
				Freelance 2016 SP1 RU6
				Freelance 2019 SP1 RU1
				Freelance 2019 SP1 FP1 RU1
				Freelance 2019 SP1 FP1 RU2
				Freelance 2019 SP1 FP1 RU3

Table 1. Supported Sytems

Control System	Supported Major Versions	Supported Rollup Versions
Advant	- Advant Master Controllers:	
Master	AC 450, AC 410, MP	
controllers	200/1, Safeguard	
	415, MG 230/1, AC 160, AC 110,	
	AC 70, 450 RMC	
	 Advant Master Communication interfaces: 	
	CI520, CI522, CI541,	
	AF100, CI810, CI820,	
	PBS, PU535, CI532,	
	CI535, CI570, CS513,	
	CI510, CI610, CI615,	
	CI810, CI820, CI626,	
	CI627, CI630, CI631, CI830, CI671	
Melody Rack	- Melody Composer	
controllers	4.0 to 7.x	
	- S+ Engineering (for	
	Melody) 1.0.0, 1.0.1,	
	1.0.2, 1.1.0,	
	1.1.1, 1.1.2, 1.1.3, 1.4,	
	1.4.1, 2.0	
Harmony	- S+ Engineering 1.0 to 2.4	
Rack controllers (LCS only)	- Harmony Composer 5.1, 6.0 till 7.2	

Control System		Supported Major Versions	Supported Rollup Versions
Harmony Rack/ Symphony Din controllers (For Darformance	-	HAPI 3.1.0.15 to 4.3.0.8 and Control API 5.x.x.x For Performance collection, Composer Harmony version is not relevant. It depends only on HAPI version.	
Performance collection)	-	Scan through the bridge modules IIT03/IIT13/IEB800 is supported.	
	-	To scan the network through an IEB bridge, it is suggested to start the data collection from the PN800 network. Data collection messages that traverse the bridge, require as minimum firmware version for the IPT800, B.0 or higher.	
S+ Operations HMI	-	2.0.0 to 2.0.6, 2.1.0 to 2.1.2, 2.1.2.3, 2.2, 3.3.1, 3.3.2(Yoda2)	

Control System		Supported Major Versions	Supported Rollup Versions
System 800xA	-	SV4.1 Rev M - SV5.0, SV5.0 SP1, SV5.0 SP1a, SV5.0 SP2 to SV5.0 SP2 Rev E SV5.1 to SV5.1 FP4 Rev E 6.0, 6.0.1, 6.0.2, 6.0.3, 6.0.3.1, 6.0.3.2, 6.0.3, 6.0.3.4 6.1, 6.1.0.1, 6.1.1, 6.1.1.1 6.2 -	SV5.1 Rev D Rollup 5, SV5.1 Rev E Rollup 2, SV5.1 FP4 Rev D Rollup 4, SV5.1 FP4 Rev D Rollup 5, SV5.1 FP4 Rev E Rollup 3, SV5.1 FP4 Rev E Rollup 4, 6.0.3.3 Rev B 6.0.1 Rollup 1, 6.0.3 Rollup 1, 6.0.3 Rollup 2, 6.0.3 Rollup 3, 6.0.3 Rollup 4, 6.0.3.3 Rev B 6.1 Rollup 1
QCS with System 800xA HMI	-	5.0 SP2, SV 5.1 to 5.1 FP4 Rev E, 6.0, 6.0.1, 6.0.2, 6.0.3, 6.0.3.1, 6.0.3.2, 6.0.3.3, 6.0.3.3 Rev B, 6.1, 6.1.0.1, 6.1.1, 6.1 SP2 , 6.1 SP3 RU1, 6.1 SP4	
Non-ABB Systems (Cyber security data only)	-	All Windows Operating systems with .Net framework version 3.5 SP1 or above installed.	
ESXi	-	6.0, 6.7, 7.0	

Table 1. Supported Sytems

1.3 Compatibility

MCS-DC 2.5 or newer versions are compatible with MCS-FW version 1.4 and above. These are not backward compatible. MCS-FW 1.4 is compatible with MCS (on-premise) V5.6 and newer versions. Refer to the Digital Service Products Life cycle Plan[5] Section 6, Additional Information

2 Prerequisites

In this section are listed the prerequisites that must be met before starting data collection.

The verification of data collection prerequisites and some configuration settings may differ based on the Operating System that is installed on a given node. In this User Manual we will refer to "legacy" and "modern" Operating System versions where "legacy" are Windows XP and Windows Server 2003, "modern" are Windows 10 and Windows Server 2012 or above, etc.

2.1 Common Prerequisites

These prerequisites are applicable to all Systems and System combinations.

- MCS-DC must be deployed in the node from which data collection must be launched. Based on the system and the controllers that must be collected, the suggested launch node may vary. Details are described in each system data collection process section.
- The User must have Administrator rights. For a Domain network, the User must also be a member of the Domain administrator group.
- The minimum screen resolution is 1280x800 (Height 1280, Width 800)

-

Microsoft Windows User Access Control (UAC) must be disabled if the system is in work group network. Check if the UAC is disabled.

🗣 User Account Control Settings		-		×
Choose when to be User Account Control hel Tell me more about User	notified about changes to your computer ps prevent potentially harmful programs from making changes to Account Control settings	your computer.		
Always notity	Never notify me when: • Apps try to install software or make changes to my computer • I make changes to Windows settings • Not recommended.			
Never notify	Сок	Cancel]	

Figure 1. User account control settings (UAC)

- MCS-DC uses port number 23571 as default. Should you need to use a different port, refer to Appendix A of this document. If MCS-DC detects that the port that is chosen is already in use, a notification is shown, asking to change the port number.
- The node where MCS-DC is deployed must be reachable by IP Address from any other node part of data collection.
- Enable file and Printer sharing.
 - The procedure to "Enable file and Printer sharing" is different for legacy and modern operating systems.
 For modern operating systems, in allowed programs section under firewall settings, click on change settings to enable the File and Printer sharing service for all networks (Domain, Public and Private).

						- • ×
🕒 🗢 🖬 🕨 Control Panel 🔸 All Control Panel	tems + Windows Firewall + Allowed Programs				 4 Search Control Panel 	Q
File Edit View Tools Help						
The care there room room						
	Allow programs to communicate through W	indows Fi	irewall			
	To add, change, or remove allowed programs and ports, cl	ick Change	settings.			
	Whether the state of all solar and solar the second states		(Cha	n no cottin ne		
	what are the risks of allowing a program to communicate:		Cha	inge settings		
	Allowed programs and features:					
	Name	Domain	Home/Work (Private)	Public ^		
	External Alarms Engine	~	V			
	File and Printer Sharing		V			
	File Distribution Client	~	2			
	File Distribution Service	•	2			
	☑ FindToolTestApp	•	2			
	Graphics Builder Add-in Registration Tool	•	⊻			
	Graphics Builder Launcher	•	2			
	✓ healthd		2			
	Hiding Mask Exporter					
	History Archive Tool	•	✓			
	History Server		v			
	HomeGroup					
			Details	Re <u>m</u> ove		
			Allow anothe	er p <u>r</u> ogram		

Figure 2. File and Print sharing

• In case of Windows XP, open Windows Firewall exceptions in the Control Panel and enable "File and Printer Sharing".



Figure 3. File and printer sharing for Windows XP

Enable Windows Management Instrumentation (WMI).

The procedure to "Windows Management Instrumentation (WMI)" is different for legacy and modern operating systems.

• For modern operating systems, in allowed programs section under firewall settings, click on change settings to enable the File and Printer sharing service for all networks (Domain, Public and Private). Refer Section 5, Troubleshooting for alternative method and troubleshooting.



Figure 4. Windows Management Instrument (WMI)

 In case of Windows XP, go to Administrative Tool -> Computer Management -> Services and Applications -> WMI control. Right click on WMI control and select the tab Security. Add the logged in administrator user if not present in Group or user names section.
 Enable the Remote enable permission for the user and click OK. For allowing WMI through firewall, execute the command *"netsh firewall set service RemoteAdmin enable"* in a command prompt.



Figure 5. WMI for Windows XP

Turn on Network Discovery.

As shown in figure, enable network discovery for Domain and Private network profiles.

Allowed apps and features:				
Name	Dom	ain Private	Public	1
✓ Narrator QuickStart				
Netlogon Service				
✓ Network Discovery	Z			
Node Administration Service			☑	
OPC AE Event Collector			✓	
OPC DA Connector			✓	
OPC Enum			\checkmark	
Performance Logs and Alerts				
Proximity Sharing			✓	
Remote Administration			\checkmark	
Remote Assistance			✓	
Remote Desktop	V	✓	✓	~
		Details	Remov	e

Allow apps to communicate through Windows Defender Firewall

To add, change, or remove allowed apps and ports, click Change settings.

Figure 6. Turn on Network Discovery

-> It is important to revert all the changes made as part of prerequisite settings, after completing the data collection.

2.2 ABB cyber security guidelines

Below suggestions are provided to comply with ABB cyber security guidelines:

- For complying with ABB minimum cyber security guidelines, it is recommended to launch MCS-DC on a less privileged node, run as administrator and provide required credentials to access other computers on the network.
- It is recommended to use the secured communication for data collection. Before launching the MCS-DC tool, it is mandatory to refer Appendix B for details on secured communication and to configure secured communication.
- It is recommended to use TLS versions 1.2 or above on the MCS-DC launch node. If the recommended TLS version is not supported or available on the launch node, please find a suitable launch node before running MCS-DC to make communication secure.
- User will be warned and acknowledgment will be required to proceed with data collection when TLS version is less than 1.2 or weaker cyber suits are found on the launch node.
- It is recommended to have an Anti-virus installed on the node where MCS-DC is launched.

2.3 Effects on cyber security policies

MCS-DC execution may trigger cyber security warnings. Examples of this are:

- Executing the tool could trigger alarms in network anomaly detection systems. An allow-listing solution could block execution of the tool
- Refer to the documentation of the cyber security solution(s) or consult the service organization which implemented the cyber security solution(s) to determine the possible impact and possible measurement(s) to be taken to overcome any negative impact when operating the tool.
- All needed services, user rights and needed open ports are documented in Section 2, Prerequisites and Section 3, Data Collection Process, in this user manual.

2.4 System 800xA

2.4.1 In Domain:

- Microsoft[®].Net framework 1.1 or above.

🎲 Registry Editor				
<u>Eile E</u> dit <u>V</u> iew F <u>a</u> vorites <u>H</u> elp				
🕀 🧰 Exchange		Name	Туре	Data
😥 💼 Fusion		(Default)	REG_SZ	(value not set)
🕀 🧰 HostMIB		👸 Install	REG_DWORD	0×00000001 (1)
🗄 💼 IE Setup		восм	REG_DWORD	0×00000001 (1)
📄 💼 🛅 IE4		R SP	REG DWORD	0×00000001 (1)
🗄 💼 IGMPMibAgent		~~~~	_	
IMAPI				
🗈 🚞 InetMgr				
🗎 📋 InetStp				
🗉 💼 Intelligent Search				
📋 📋 Internet Account Manager				
Internet Connection Wizar				
🕀 🧰 Internet Domains				
🗈 🧰 Internet Explorer				
😟 🧰 IPMulticastMibAgent				
IPSec	_			
😥 💼 Jet				
🕀 🚞 LANManagerMIB2Agent				
🗈 🚞 MediaPlayer				
🗄 🧰 MessengerService				
📄 🕀 🧰 MMC				
MMCtIsForIE				
🗈 📄 Mobile				
😟 📄 MS Design Tools				
🗄 📄 MS Setup (ACME)				
🗎 🕀 🧰 MSDTC				
🕒 💼 MSE				
🗈 🧰 MSFTPSVC				
MSLicensing				
🗈 🧰 MSMQ				
🕒 😐 🧰 MSOSOAP				
🕀 💼 MSSOAP				
🕀 🧰 Multimedia				
NET Framework Setup				
Eul Eul				
i v1.0.3705				
De De NDP				
⊡-/🔁 ∨1.1.4322				
1033				
Product				
I → I NetDDE				
NetSh	۲			
		1		
My Computer HKEY LOCAL MACHINE'S	OFTV	VARE\Microsoft\NET Fram	ework Setup (NDP(v1.1.4	322

Figure 7. .Net framework 1.1

Enable Windows Management Instrumentation (WMI).

The procedure to enable **"Windows Management Instrumentation"** is different for old and new Operating Systems.

 To enable WMI, go to Allow app through windows firewall in the firewall settings, click on change settings to enable the WMI for all networks (Domain, Public and Private). Refer Section 5, Troubleshooting for alternative method and troubleshooting.

Edit View Tools Help	naorraierteins / windows mewair / Anowea rrograms					• • search combol Pariel	
care sites roots ricip							
	Allow programs to communicate through Wi	ndows F	rewall				
	To add, change, or remove allowed programs and ports, cli-	ck Change	settings.				
	What are the risks of allowing a program to communicate?		🛛 🚱 Cha	nge settin	gs		
	Allowed programs and features:						
	Name	Domain	Home/Work (Private)	Public	*		
	Windows Communication Foundation			П			
	Windows Firewall Remote Management						
	Windows Management Instrumentation (WMI)		2	2			
	Windows Media Player						
	Windows Media Player Network Sharing Service						
	Windows Media Player Network Sharing Service (In						
	Windows Peer to Peer Collaboration Foundation						
	Windows Remote Management						
	□ Wireless Portable Devices						
	WMI(32Bit)	\checkmark		₹	_		
	WMI(32bit)	V		1			
	WMI(32bit)	✓	✓	1	*		
			Details	Remov			

Figure 8. Windows management Instrument (WMI)

 In case of Windows XP, go to Administrative Tool -> Computer Management -> Services and Applications -> WMI control. Right click on WMI control and select the tab Security. Add the logged in administrator user if not present in Group or user names section. Enable the Remote enable permission for the user and click OK. For allowing WMI through firewall, execute the command "netsh firewall set service RemoteAdmin enable" in a command prompt.



Figure 9. WMI for Windows XP

-

O Services (Local)					
Windows Management	Name	Description	Status	Startup Type	Log On As
Instrumentation	Windows Driver Foundation - User-mode Driver Framework	Creates and	Running	Manual (Trig	Local System
Character and in a	Windows Encryption Provider Host Service	Windows E		Manual (Trig	Local Service
Pause the service	🖏 Windows Error Reporting Service	Allows error		Manual (Trig	Local System
Restart the service	🖏 Windows Event Collector	This service		Manual	Network Service
	🖏 Windows Event Log	This service	Running	Automatic	Local Service
Description	🖏 Windows Firewall	Windows Fi	Running	Automatic	Local Service
Provides a common interface and	🖏 Windows Font Cache Service	Optimizes p	Running	Automatic	Local Service
object model to access management	🖏 Windows Image Acquisition (WIA)	Provides im		Manual	Local Service
information about operating system,	Windows Insider Service	wisvc		Manual	Local System
devices, applications and services. If this service is stopped, most Windows-based software will not function properly. If this service is disabled, any services that explicitly deviced to the life of the store of the services.	Windows Installer	Adds, modi		Manual	Local System
	🖏 Windows License Manager Service	Provides inf	Running	Manual (Trig	Local Service
	🖏 Windows Management Instrumentation	Provides a c	Running	Automatic	Local System
	🖏 Windows Mobile Hotspot Service	Provides th		Manual (Trig	Local Service
depend on it will fail to start.	🖏 Windows Modules Installer	Enables inst		Manual	Local System
	Windows Process Activation Service	The Windo	Running	Manual	Local System
	Windows Push Notifications System Service	This service	Running	Automatic	Local System

Start "Windows Management Instrumentation" service from services if it is not already running on all nodes.

Figure 10. WMI running

- User accounts and passwords with administrative rights are required for all 800xA computers.
- The launch node of MCS-DC must be part of a running 800xA System.
- MCS-DC will not collect data on nodes that have installed HP disk driver version 6.26.0.64 (hpcisss2.sys) or lower.
- Make sure to revert all the changes done as part of the prerequisite settings after completing the data collection.

2.4.2 In Workgroup:

Microsoft[®].Net framework 1.1 or above



Figure 11. .Net 1.1 or above

-

Windows Management	Name	Description	Status	Startup Type	Log On As
Instrumentation	Windows Driver Foundation - User-mode Driver Framework	Creates and	Running	Manual (Trig	Local System
Stop the convice	Windows Encryption Provider Host Service	Windows E		Manual (Trig	Local Service
Pause the service	Windows Error Reporting Service	Allows error		Manual (Trig	Local System
Restart the service	Windows Event Collector	This service		Manual	Network Service
	🖏 Windows Event Log	This service	Running	Automatic	Local Service
Description	🖏 Windows Firewall	Windows Fi	Running	Automatic	Local Service
Provides a common interface and	🖓 Windows Font Cache Service	Optimizes p	Running	Automatic	Local Service
object model to access management	Windows Image Acquisition (WIA)	Provides im		Manual	Local Service
information about operating system,	Windows Insider Service	wisvc		Manual	Local System
this service is stopped most	Windows Installer	Adds, modi		Manual	Local System
Windows-based software will not function properly. If this service is disabled, any services that explicitly	Windows License Manager Service	Provides inf	Running	Manual (Trig	Local Service
	Windows Management Instrumentation	Provides a c	Running	Automatic	Local System
	🖏 Windows Mobile Hotspot Service	Provides th		Manual (Trig	Local Service
depend on it will fail to start.	Windows Modules Installer	Enables inst		Manual	Local System
	Windows Process Activation Service	The Windo	Running	Manual	Local System
	Windows Push Notifications System Service	This service	Running	Automatic	Local System

Start "Windows Management Instrumentation" service from services if it is not already running on all nodes.

Figure 12. WMI Running

 Create a new registry key LocalAccountTokenFilterPolicy under the path *HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows\CurrentVersio n\Policies\system\LocalAccountTokenFilterPolicy* and provide the value as 1. This setting can be reverted once the data collection completes. For detailed procedure on disabling UAC, Section 5, Troubleshooting.
 Enable Windows Management Instrumentation (WMI).

The procedure to **"Windows Management Instrumentation (WMI)"** is different for legacy and modern operating systems.

• For modern operating systems, in allowed programs section under firewall settings, click on change settings to enable the File and Printer sharing service for all networks (Domain, Public and Private). Refer Section 5, Troubleshooting for alternative method and troubleshooting.



Figure 13. Enable Windows Management Instrumentation

 In case of Windows XP, go to Administrative Tool -> Computer Management -> Services and Applications -> WMI control. Right click on WMI control and select the tab Security. Add the logged in administrator user if not present in Group or user names section.
 Enable the Remote enable permission for the user and click OK. For allowing WMI through firewall, execute the command "netsh firewall set service RemoteAdmin enable" in a command prompt.

Jearun			
县 Computer Managemen			
📕 File Action View Win	dow Help		_8×,
			loi loi
Computer Management (Loo	al)		6
System Tools System Tools Good Starter And Starter An	WAI Control WAI Control Control Servial Log Control Servial Log Servial Log Network Service Network Service	Properties gging Backup/Restore Security anavigation allows you to set namespa ot Administrators) Add Remove	Advanced Advanced ce specific security. Security
	Permissions for Administrators	Allow Deny	ancel Apply
	Full Write		anaa oppy
	Partial Write		
	Provider Write		
	Enable Account		
	Remote Enable	Image:	
	For special permissions or for adv click Advanced.	anced settings, Advanced	
	ОК	Cancel Apply	

Figure 14. WMI for Windows XP

- User accounts and passwords with administrative rights are required for all 800xA computers.
- The node that runs this collection tool must be a part of running System 800xA.
- MCS-DC will not collect data on the nodes which has HP disk driver version of 6.26.0.64 (hpcisss2.sys) or lower.
- It is important to revert all the changes made as part of prerequisite settings, after completing the data collection.
2.5 Freelance System

- The following are the prerequisites for freelance data collection. In order to determine whether the pre-requisites are met on each computer node in the network, a tool was created that not only finds whether the pre-requisites are met, but also assists the user in installing them if they are not. With the help of the tool, changes can be reverted after data collection. The tool is described in more detail in Appendix G.

- Microsoft[®].Net Framework 2.0 Service Pack 1 or above. Installed .Net version can be checked under the path HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft**NETFramework** Setup\NDP\v2.xx\Full.

🦻 📲 MediaCenterPeripheral	^ Name	Туре	Data
MessengerService MigWiz MigWiz Mobile Mobile Mobile MSSUE MSSUE MSSTC MSSQ MSQ MSSQ MSQ MM MM MM MM M	 ①Cefault) 22 23 24 25 26 27 28 29 20 20	REG_SZ REG_DWORD REG_SZ REG_DWORD REG_DWORD REG_DWORD REG_SZ	(value not set) 0x0000001 (1 5420 0x00000001 (1 0x00000001 (2 0x00000002 (2 2.0.50727.5420

Figure 15. .Net Framework version

_

Enable file and Printer sharing.

The procedure to **"Enable file and Printer sharing"** is different for legacy and modern operating systems.

• For modern operating systems, in allowed programs section under firewall settings, click on change settings to enable the File and Printer sharing service for all networks (Domain, Public and Private).

💣 🕨 Control Panel 🔸 All Control Panel Items 🔸 Windows Firewall 🔸 Allowed Program	ns			• +	Search Control Panel	Q
View Tools Help						
Allow programs to communicate the	ough windows Fi	lewan				
To add, change, or remove allowed programs a	nd ports, click Unanges	ettings.				
What are the risks of allowing a program to com	nmunicate?	😽 Cha	nge settings			
Allowed programs and features:				T		
Name	Domain	Home/Work (Private)	Public ^			
External Alarms Engine		•				
File and Printer Sharing	×					
File Distribution Client	M	~				
File Distribution Service			2			
☑ FindToolTestApp		•	2			
Graphics Builder Add-in Registration Tool	I 🗹	✓				
Graphics Builder Launcher		✓				
☑ healthd		✓				
Hiding Mask Exporter		✓				
History Archive Tool		✓				
History Server		✓				
HomeGroup			· ·			
		Details	Remove			
		Allow anothe	r program			

Figure 16. Enable file and printer sharing

• In case of Windows XP open the Windows Firewall exceptions from the Control Panel and enable File and Printer sharing.

🛚 Wind	ows Firewall	
General	Exceptions Advanced	
Windov progran to work	ws Firewall is blocking incoming network connections, except f ms and services selected below. Adding exceptions allows som < better but might increase your security risk.	or the e programs
Program	ms and Services:	
Nam	e	^
A	BB.AS.DC.SPD ataCollector	
🗹 Co	ontrol Builder F	
🗹 Fil	le and Printer Sharing	
⊡ Fr	eelance 3.2.7368 5P2	
🗹 Fr	reelance 9.2.7968 SP2	
🗹 H/	ASP LLM	
🗹 Ne	etwork Diagnostics for Windows XP	
🗹 Re	emote Assistance	
🗹 Re	emote Desktop	
I I I I	MSYNC	
	PnP Framework	
Add	Program Add Port Edit [Delete
🗹 Disp	play a notification when Windows Firewall blocks a program	
<u>What a</u>	are the risks of allowing exceptions?	
	ОК	Cancel

Figure 17. File and printer sharing for Windows XP

Start Windows Services application and verify that the Service "Server" is running. It must be running and its startup time must be automatic. Refer Section 5.5, Troubleshooting Issue 2 for more details.

Services						
<u>File</u> <u>Action</u> <u>View</u> <u>H</u> elp						
♦ ● □	D II ID					
Services (Local) Services (Lo	ocal)					
Server		Name	Description	Status	Startup Type	Log On As
		🎑 Secondary Logon	Enables star		Disabled	Local Syste
Stop the service		🔍 Secure Socket Tunneling Protocol Service	Provides su		Manual	Local Service
Restart the service	e	🔍 Security Accounts Manager	The startup	Started	Automatic	Local Syste
		🔍 Security Center	The WSCSV		Disabled	Local Service
Descriptions		🔍 Sentinel Keys Server	Manages Se	Started	Automatic	Local Syste
Supports file priv	nt and named-pipe	🔍 Sentinel Protection Server	Manages Se	Started	Automatic	Local Syste
sharing over the	network for this	🧠 Sentinel Security Runtime	Provides ru	Started	Automatic	Local Syste
computer. If this	service is stopped,	🔅 Server	Supports fil	Started	Automatic	Local Syste
these functions v	vill be unavailable. If	🔍 Shell Hardware Detection	Provides no	Started	Automatic	Local Syste
this service is dis	pend on it will fail to	🔍 Smart Card	Manages ac		Manual	Local Service
start.		Smart Card Removal Policy	Allows the s		Manual	Local Syste

Figure 18. "Server" running in windows services

- Start "Windows Management Instrumentation" service from services if it is not already running on all nodes.
- Disable User Account Control. In order to disable the UAC completely create a new registry key LocalAccountTokenFilterPolicy of DWORD type the path HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows \CurrentVersion\Policies\system\LocalAccountTokenFilterPolicy and provide the value as 1. This setting can be reverted once the data collection completes. For detailed procedure on disabling UAC, refer Section 5, Troubleshooting.
- Enable Windows Management Instrumentation (WMI).

The procedure to enable "**Windows Management Instrumentation**" is different for old and new Operating Systems.

To enable WMI for new Operating Systems go to "Allowed Programs" in the Windows Firewall settings, and select change settings to enable the WMI for all networks (Domain, Public and Private). Refer to Section 5, Troubleshooting for an alternative method and for troubleshooting instructions.



Figure 19. Enable Windows Management Instrumentation

 In case of Windows XP, go to Administrative Tool -> Computer Management -> Services and Applications -> WMI control. Right click on WMI control and select the tab Security. Add the logged in administrator user if not present in Group or user names section.
 Enable the Remote enable permission for the user and click OK. For allowing WMI through firewall, execute the command *"netsh firewall set service RemoteAdmin enable"* in a command prompt.



Figure 20. WMI for Windows XP

- Turn on Network Discovery.

As shown in figure, enable network discovery for Domain and Private network profiles.

Allow apps to communicate through Windows Defender	Firewall			
To add, change, or remove allowed apps and ports, click Change settings.				
What are the risks of allowing an app to communicate?		Ch	ange sett	ings
Allowed apps and features:				
Name		Private	Public	^
Key Management Service				
✓ macmnsvc		✓		
✓ mDNS		\checkmark	✓	
Microsoft Office Outlook		✓		
✓ Narrator QuickStart		✓	~	
Netlogon Service				
✓ Network Discovery				
Performance Logs and Alerts				
Remote Desktop		✓	✓	
Remote Desktop (WebSocket)				
Remote Event Log Management				
Remote Event Monitor				\checkmark
	Deta	aile	Remov	

Figure 21. Turn on Network Discovery for Private profile

- If Freelance client nodes have Windows XP and are in a workgroup, then do the following registry settings in those nodes:
 - 1. Open registry by running the command regedit.exe
 - 2. Expand HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control.
 - 3. Select Lsa.
 - 4. Change the value for the forceguest DWORD to 0:
- User accounts and passwords with administrative rights are required for all Freelance computers. Enter the user credentials in computer name\ Username format.
- Launch MCS-DC on Freelance engineering client. If MCS-DC is launched on any other Freelance computer, then Freelance Engineering client will be skipped.
- MCS-DC will not collect data on nodes that have installed HP disk driver version 6.26.0.64 (hpcisss2.sys) or lower.
- Make sure to revert all the changes done as part of the prerequisite settings after completing the data collection.



Make sure that no external GPS clock is connected to the Freelance system for time synchronization. In rare cases, it is observed that the precision of the time signal changes during system scan, it may be prudent not to collect performance data in this case.

2.6 S+ Operations

The following software is required for installation and operation of S+ Operations Data Collector.

- .NET Framework 4.0 and above.



Figure 22. .Net Framework 4.0 and above

- Enable file and Printer sharing.

The procedure to **"Enable file and Printer sharing"** is different for legacy and modern operating systems.

• For newer operating systems, Allow app through windows firewall in the firewall settings, click on change settings to enable the File and Printer sharing service for all networks (Domain, Public and Private).

		- • ×
🚱 💭 🚽 🕋 🔸 Control Panel 🔸 All Control Panel Items 🔸 Windows Firewall 🗲 Allowed Programs	✓ 4y Search Control Panel	Q
File Edit View Tools Help		
Allow programs to communicate through Windows Firewall		
To add, change, or remove allowed programs and ports, click Change settings.		
What are the risks of allowing a program to communicate?		
Allowed programs and features:		
Name Domain Home/Work (Private) Public ^		
V External Alarms Engine V V		
✓ File and Printer Sharing		
☑ File Distribution Client ☑ ☑ ☑		
✓ File Distribution Service		
✓ FindToolTestApp		
☑ Graphics Builder Add-in Registration Tool ☑ ☑ ☑		
☑ Graphics Builder Launcher ☑ ☑ ☑		
🗹 healthd 🗹 🗹 🗹		
🗹 Hiding Mask Exporter 🖉 🗹 🗹		
☑ History Archive Tool ☑ ☑		
V History Server V V		
HomeGroup		
Detaijs Remove		
Allow another program		

Figure 23. Allow File and Printer sharing

• In case of windows XP, open windows firewall exceptions in control panel and enable file and printer sharing.

_					
General	Exceptions	Advanced			
Windov progran to work	vs Firewall is b ns and service better but mig	locking incomin s selected belov ht increase you	g network c v. Adding e: r security risl	onnections, exc ceptions allows <.	ept for the some programs
Program	ns and Servic	es:			
Name	е				^
✓ AB	B.AS.DC.SPI	DataCollector			
⊡ Co	ontrol Builder F				
🗹 Fil	e and Printer S	Sharing			
⊻ Fr	eelance 3.2.7.	568 SP2			
🗹 Fr	eelance 9.2.7	368 SP2			
🗹 Н/	ASP LLM				
☑ Ne	etwork Diagno	stics for Windov	vs XP		
🗹 Re	emote Assistar	nce			
☑ Re	emote Desktoj				
I TH	ASYNC				
	PhP Frameiain	k			~
Add	Program	Add Port		Edit	Delete
🗹 Disp	olay a notificat	ion when Windo	ws Firewall	blocks a program	n
<u>What a</u>	re the risks of	allowing except	ions?		

Figure 24. File and printer sharing for Windows XP

- Enable administrator share access in windows. To enable the administrator share access refer Section 5.5, Troubleshooting Issue 2.
- Enable Windows Management Instrumentation (WMI).

The procedure to **"Windows Management Instrument"** is different for legacy and modern operating systems.

 For modern operating systems, in allowed programs section under firewall settings, click on change settings to enable the File and Printer sharing service for all networks (Domain, Public and Private). Refer Section 5, Troubleshooting for alternative method and troubleshooting.

😋 🕞 🚽 🔐 🕨 Control Panel 🕨 All Control Panel Items 🕨 Windows Firewall 🕨 Allowed Programs					,
File Edit View Tools Help					
The same stars to be theme					
Allow programs to communicate through Wir	ndows Fi	irewall			
To add, change, or remove allowed programs and ports, clie	ck Change	settings.		-	
What are the risks of allowing a program to communicate?		😗 Cha	nge settings		
Allowed programs and features:					
Name	Domain	Home/Work (Private)	Public ^		
Windows Communication Foundation					
Windows Firewall Remote Management					
Windows Management Instrumentation (WMI)	~	M			
Windows Media Player					
Windows Media Player Network Sharing Service					
Windows Media Player Network Sharing Service (In					
Windows Peer to Peer Collaboration Foundation					
Windows Remote Management					
Wireless Portable Devices					
WMI(32Bit)	•				
WMI(32bit)					
WMI(32bit)	✓		v •		
		Details	Re <u>m</u> ove		
		Allow anothe	r program]	

Figure 25. Enable Windows Management Instrument

 In case of Windows XP, go to Administrative Tool -> Computer Management -> Services and Applications -> WMI control. Right click on WMI control and select the tab Security. Add the logged in administrator user if not present in Group or user names section. Enable the Remote enable permission for the user and click OK. For allowing WMI through firewall, execute the command *"netsh firewall set service RemoteAdmin enable"* in a command prompt.

I. File Action View W	dow Help	_ Ial ×
← → È 🖬 📽 [· •	
Computer Management (L System Tools System Tools System Vewer System Vewer System Vewer Removable Storag Removable Storag Storage Storage Storage Removable Storag Removable Storag	a) UPS OF CONF UPS CONF General Logging Backup/Restore Conf General Logging Backup/Restore Namespace navigation allows you to set Image: Conf Security for Root Security Group or user names: Conf Administrators [C25P2ES Vadministrators] CE Secure CE LOCAL SERVICE CE NETWORK SERVICE	Control Advanced
	Add Remo Permissions for Administrators Allow Derry Execute Methods Image: Comparison of the second secon	vere Security ancel Apply ceed

Figure 26. WMI for Windows XP

- It is important to revert all the changes made as part of prerequisite settings after completing the data collection.

2.7 Harmony controllers

- MCS-DC must be launched on a node that can reach the Control Network; the suggestion is to execute it in S+ Engineering Servers, or S+ Engineering Clients.
- HAPI is installed and can connect to configured ICI (IET800). IET800 is mutually exclusive for MCS-DC for the duration of data collection (MCS-DC connects to IET800 in exclusive mode).
- MCS-DC launching node must have .Net framework 4.5.2 or above.
- Microsoft Visual C++ 2012 Redistributable(x86) -11.61030 or C++ 2015 Redistributable(x86) -14.26.29910 is installed.
- HAPI is licensed based on version being installed/used.
- To collect Lifecycle information browsing a Composer Harmony project (*.epb file) data collection must be necessarily done on Composer Harmony's (S+ Engineering) node.

2.8

Advant Master controllers with System 800xA HMI

- Microsoft[®] .Net Framework 2.0 Service Pack 1 or above.
- Online Builder must not be running and should not be started while data collection is in progress. This is valid for all the system variants.



Starting the Online Builder during execution of MCS-DC will result in incomplete data collection.



In case selected target node does not have Microsoft[®].Net Framework 2.0 Service Pack 1 or higher, select another node, possibly non-critical for plant operation. There is a rare possibility and low risk of application conflicts because of two different versions of Microsoft[®].Net framework running in the same node. Once you choose the node, download and install the Microsoft[®].Net Framework 2.0 Service Pack 1 on this node and run the MCS-DC tool.

- The .Net framework version of the MCS-DC launch node must be same or lower than the .Net framework version installed on the data collection

nodes. Data collection will fail for the nodes with higher .Net framework version.

2.9 Melody Rack controllers

Microsoft[®] .Net framework 3.5 SP1 or above.

2.10 Advant MOD 300

- Exported System or Project configuration file is an important prerequisite to collect life cycle data for MOD 300 System.
- Microsoft[®] .Net Framework 2.0 Service Pack 1 or above is required for the MCS-DC to run. This is not supplied with the MCS-DC package. User is requested to download it from the Microsoft website.
- The MOD API must be installed in the MCS-DC launch node.

2.11 Procontrol P13 controllers

- Microsoft[®] .Net Framework 2.0 Service Pack 1 or above is required for the MCS-DC to run. This is not supplied with the MCS-DC package. User is requested to download it from the Microsoft website.
- Exported System or Project configuration file is an important prerequisite to collect life cycle data for Procontrol P13 hardware. Please note, in the exported P13 Source file (.CSV), the text separator must be double quotes (") and the field separator should be comma (,). For more details refer Appendix C.

2.12 QCS with System 800xA HMI

- Microsoft[®] .Net Framework 2.0 Service Pack 1 or above is required for the MCS-DC to run. This is not supplied with the MCS-DC package. User is requested to download it from the Microsoft website.
- Latest config.xml file from QCS connectivity server.

2.13 Non-ABB System (Security Data collection)

- Microsoft[®] .Net Framework 3.5 Service Pack 1 or above is required for Non-ABB security data collection. This is not supplied with the MCS-DC package. User is requested to download it from the Microsoft website.
- Make sure Windows Management Instrumentation (WMI) service is running in Windows services list. If not, start it.
- Enable Windows Management Instrumentation (WMI) in Windows firewall exemption list on all the nodes.

2.14 VMware Server Health Data

 In order to collect VMware server health data, VMware performance counters must be enabled in each VMware server. These counters are about VM memory and VM processor. These counters are usually enabled, but it is suggested to check that they are really available.

File	Action	View	Favoritae	Window	Haln	
	Availab	ole count	ers			
	Select	counter	s from comp	uter:		
1	<loc< td=""><td>al compu</td><td>uter></td><td></td><td>-</td><td>Browse</td></loc<>	al compu	uter>		-	Browse
	Vid	eo Sch	eduler			E
	(YM	Memo	řy 🛛			Ð
	(VM	Memo	ry ssor			Ð



It has been observed that, at times, VMware provides inconsistent results. To overcome this, MCS-DC has a data collection retry option that can be enabled to guarantee that a certain number of retries is performed. Select settings (gear icon on the top-right corner of the screen) and select "Collection Retry" tab.

The number of retries can be selected to be between one and six; in addition, a time-interval between retries can be selected too (minimum thirty seconds, maximum two minutes).

ABB	Settings				×
General (Communication	Collection Retry		AC 800M	
Enable Virtua	I Machine Data Colle	ction Retry			
Number of Retrie	es: 6	~			
Retry Intervals :	30	Ý	Sec		
Enable Disk [Data Collection Retry]			
Number of Retrie	es: 6	~			
Retry Intervals :	30	~	Sec		
				Арріу	/ Cancel

Figure 28. Collection Retry

3 Data Collection Process

MCS-DC has two modes of operation

- Basic mode
- Advanced mode

3.1 Basic Mode

This mode is intended for users who prefer ease of use and minimal user interaction. In this mode, MCS-DC identifies the HMI and controller systems automatically. User will not have much of the customizable options (like choosing only performance data or life cycle data, choosing only specific nodes for data collection, etc.).

If the system could not be identified automatically, users have option to switch the collection mode from basic to advanced.



Figure 29. Switch to Advanced Mode

3.2 Advanced Mode

This mode is intended for expert users who prefer complete control on the data collection process with respect to selecting the systems, nodes, data category (like performance or Life cycle), etc. In this mode, user will have opportunity to fix the issues, reported by MCS-DC during node scanning and data collection and then will be able to re-scan or re-collect the failed nodes. Detailed logs and progress updates will be provided by MCS-DC during scanning and data collection.

3.3 Basic Mode Data Collection

3.3.1 Basic mode data collection for System 800xA

- Deploy MCS-DC in the hard drive (Operating System partition) of the node from which data collection must be executed. Depending on the HMI/Controller, MCS-DC launch nodes may vary. For 800xA HMI data collection, MCS-DC can be launched on any 800xA node. Depending on the connects, below are the launch nodes for various connects.Please note, basic mode is not supported for 800xA HMI with Harmony Rack controllers and 800xA HMI with Procontrol P13 controllers.
 - 800xA HMI with AC 800M controllers:

Any 800xA node

• 800xA HMI with AC 70, 110, 160 controllers:

Any 800xA node

• 800xA HMI with Freelance controllers:

Any 800xA node

• 800xA HMI with AC 410, 450, MP, SG 400 controllers:

Any 800xA node

• 800xA HMI with Melody Rack contollers:

Any 800xA node which is part of Onet network. Additionally CSE_Config has to be synchronized in all the 800xA nodes

• 800xA HMI with MOD 300 controllers:

Any 800xA node

• 800xA HMI with QCS controllers:

Any 800xA node with QCS connect

2. Double-click the **MCS-DC_Launcher.exe**, to launch the tool. It is present inside the unzipped MCS-DC folder. The initial screen appears as shown in Figure 30. MCS-DC tool runs the below checks on the launch node. If the checks are passed, a Green tick mark is shown, click the **Launch** button to proceed for data collection. If the checks fail, a Red cross mark is shown, user has to fix the issue and launch the MCS-DC tool again.

A	B	B	My	Contr	ol Sys	tem - D	ata Co	llector									×
1		1				1				100	17	1			13		17
								1	C	S	-	D	C				
						.Net v	ersion o	check						9	?		
						User p	orivilege	e check						9			
						Disk s	pace ch	heck						9			
						MCS-	DC laun	ch drive	e chec	k				9			
						N	ew colle	ection		0	Mergi	ng of	data f	iles			
						(c	lose 🤇					Laun	ch -	•)			
									1								

Figure 30. .NET Framework version check and Prerequisite check status

i

In the event that the release date of MCS-DC is 180 days older than the launch date, the user will be notified that there is a newer version available in the ABB library. Nevertheless, the user will not be prevented from launching the product and collecting data. • .NET Framework version check

If the .NET Framework version is 1.1 or above, then this check is passed and MCS-DC 2.X version can be launched for data collection.

If the .NET Framework version is lower than 1.1, then this check is failed and MCS-DC 2.X version cannot be launched for data collection, instead MCS-DC 1.9.x version will be launched for data collection. Please refer MCS-DC 1.9.x user manual for data collection procedure.

• Prerequisites check

Below prerequisites are validated. User can proceed for data collection only if these checks are passed.

a) User privileges check, checks if the MCS-DC is launched in the user account with administrator privileges.

b) System drive launch check, MCS-DC tool must be launched only from the local disk drive of the launch node.

c) Required disk space check, free disk space of at least 500 MB must be available on the disk drive from which the MCS-DC is launched. 3. Provide the System ID of the 800xA system and your full name and provide Password for encryption. This password will be used for encrypting collected data and create system data file. Decryption of the collected data is possible only at 3 places, namely, My Control System web, My Control System On-premise and My Control System Portable. To use the system data file at My Control System Portable, the user needs to enter the same password, which is entered here, to decrypt the data. So, remember this password. Once all the required inputs are provided, select Basic Mode (default selection). Upon clicking on the Scan button, validation of System ID and Collected by fields are executed. Tick mark appears if validation succeeds and cross marks appear when validation fails against respective fields. Correct the errors and click on the Scan button to proceed further.

	System ID (1) Please re-enter the password	?
0	SID1234	
	Collected By	
0	test	
	Provide password for encryption (Enter between 8-16 character)	
0	*****	۲
	Re-enter password	
	******	۲
	Basic Mode Advanced Mode	
-	n the basic mode, MCS-DC will detect the system automatically. Basic mode is not supported for 3- operations. 800xA and Freelance are supported. But 800xA with Harmony or Procontol P13 particulars are not supported. Use advanced mode for these systems. Press the scan button to for the systems.	

Figure 31. Provide System ID

4. Select Scan button to start the system scan. This results in the identification of the HMI, the controller and the 800xA System version. A progress bar is shown to indicate the scan status. This operation may take a few minutes to complete, as it depends on the size of the system.



Figure 32. System Scan

5. After the scan is successfully completed, details of HMI, controllers and system version are displayed.

Below are the supported controllers related to 800xA HMI on this release:

- AC 800M
- AC 800PEC
- AC 70, 110, 160
- Freelance
- AC 410, 450, MP, SG 400
- Melody Rack
- MOD 300
- QCS
- 6. Below are the supported data category options for 800xA HMI:
 - Performance
 - Life cycle
 - Software
 - Security (Cyber security)
- 7. Below are the supported data category options for the controllers:
 - AC 800M:
 - a) Performance
 - b) Life cycle
 - AC 800PEC:
 - a) Life cycle
 - AC 70, 110, 160:
 - a) Life cycle
 - Freelance:
 - a) Performance
 - b) Life cycle
 - AC 410, 450, MP, SG 400:
 a) Performance

b) Life cycle

- Melody Rack
 - a) Performance
 - b) Life cycle
- MOD 300
 - a) Life cycle
- QCS
 - a) Life cycle
- 8. Refer below the required inputs for each system:



The procedure to export system configuration files can be found in Appendix D

- 800xA HMI:
 IP range (to scan and detect non-800xA nodes) Admin user credentials to access all computer nodes.
- AC 800M controller:

No input settings are needed for collecting performance and life cycle data from AC800M controllers. Controller crash files are collected from both primary and backup Connectivity Servers; the maximum size of files that are collected can be selected. Click on settings (the gear icon on the top right corner) and select the tab AC800M. From drop down menu, select the maximum size for the collection file. Crash file collection is enabled by default with a maximum file size of 15MB. Other possible choices are 5, 10, or 20 MB maximum. File collection can be disabled by unchecking the provided check box.

By default, AC800M controller data is collected by MCS-DC using AfwOPCDASurrogate service. As this is a licensed service, if the license is not present in the system, an error message will be displayed in all HMI nodes. Alternatively, users may choose ABB.AfwOpcDaServer service instead, by selecting the drop-down menu shown below.

The collection of AC 800M lifecycle data from a system with a large number of control structure objects (for e.g a large number of redundant IO modules) may time out in certain rare cases. Users are advised to uncheck the option 'Collect redundant devices' in such cases and proceed with the collection process.

ABB	Settings			×
General	Communication	Collection Retry	AC 800M	
Collect A	C 800M crash files			
Crash file m	naximum size 15	✓ MB		
OPCServers	ABB.AfwOpcDaSur	rogate.1 🗸		
Collect re	dundant devices (disable	this in case of large numb	per of devices on	control structure)
			Apply	Cancel

Figure 33. AC 800M data collection settings

- AC 70, 110, 160 Controllers: File location of customer project (.BAX file)
- Freelance Controller: File location of customer project (.csv/.csvs file). If the customer project file type is .csvs, user has to provide the customer project decryption key.
- AC 410, 450, MP, SG 400 Controllers: Controller data collection happens in sequential manner, hence, collection duration per controller needs to be set. See the screenshot below. Minimum time interval that can be set between two controller

collection is 2 minutes and maximum 30 minutes. Higher the duration, more data samples will be available for further calculations.

ABB	Settings		>
General	Communication	AC400	
Collection 1	fime: 30	 minutes 	

Figure 34. Collection time interval

- Melody Rack Controller: Melody Island Devices CSE_Conf File Asset Export Folder Composer Melody node IP Address User-name Password
- MOD300: Latest ATF file from AdvaBuild engineering node
- QCS controllers: Latest config.xml file from QCS connectivity server
- 9. Clicking on the **Continue** button will take to Configuration Wizard where the user needs to provide necessary input parameters required for data collection. The first input screen is IP range input for the nodes that are not part of Node Admin structure of 800xA.

Users can switch the collection mode from basic to advanced, by clicking 'Switch to Advanced mode' button.

10. All HMI and controller nodes will be detected by MCS-DC from Node Admin Structure and their respective IP's will be read automatically. Enter only the range of IP's related to other computers for which MCS-DC needs to collect data and are not part of the Node Admin structure. This is only an optional input. If there are no IT assets, other than HMI and Controller nodes, user can proceed without providing IP range.

A B My Control Sys	m - Data Collector	i i i i i i i i i i i i i i i i i i i	٥	×
E Collection for	P Configuration Wizard	SID12345-Test	۵	i
	The IP(1) of HM and Centrater(s) incides will be read automatically Enter only the range of IP(s) Hilded to other IT Areets like Holdwork Centrguration.	Protect, Solitobe, Routers and other computers that are not part of		
	Add Added IP Range 1922 16 52 48 To 1922 16 52 19			
		Rinov Ban Co	ntinue	

Figure 35. IP range Input

11. Provide the IP range and click on **Add** button. User can provide multiple ranges too. Larger the range of IP's, more time will be taken by MCS-DC to complete the node scan. Hence, it is better to provide specific range related to required computers. For these nodes, life cycle and security data can be collected.

Collection for	Configuration Wizard	SID12345-Test	0	
	IP Range Input 🥥			
	The P(s) of Hill and Controllers) nodes will be read automatically. Enter only the range of P(s) related to other IT Assets like Network Configuration.	k Printers, Switches, Routers and other computers that are not part of		
	Start IP address 172 + 16 + 12 + 10			
	End IP address 172 - 16 - 12 - 11			
	Addred & Flange			

Figure 36. IP Details

12. If a wrong IP range is added, there is option to remove that. To remove, select the added IP range by clicking on it and then click on the **Remove** button. For these nodes, life cycle and security data can be collected.

My Control Syst	em - Data Collector	-	۰	×
E Collection for	Configuration Weard	SID12345-Test	٥	i
	The P(s) of VMB and Controller(s) modes will be read automatically. Either only the range of P(s) related to other IT Assets like Nation Printers, Switches, Routers and other computes the Configuration.	it are not part of		
	SatP Asses			
	Add			
	Added P Rusys 172.16.12.10 To 172.16.12.11			
		Remove		
		Back Cont	anue	

Figure 37. IP Range Input

13. Click on the **Continue** button to proceed. There is option to go back to the previous window in each step of the configuration.

14. Next input is User Credentials. As appropriate, provide the Username and Password in the format 'domain name\username' or '.\username', depending on the type of network (domain or Workgroup) used. Alternatively, select a user account from the drop-down list that has the necessary privileges for data collection. The required user privileges are outlined in Section 2.4, Prerequisites. Click the Add button.

ABB My Control Syst	iem - Data Collector	-		×
III Collection for	Configuration Waard	SID12345 Test	0	i
	User Credentials 🥥			^
	Please provide the user names and parswords to access the HM nodes for data collection			
	Selected IP Range			
	172 18 12 10 To 172 18 12 11			
	User Crendentials User Crendentials for Full Access			
	UserName			
	SP6xdomi800xaservice			
	Patrod mmd			
	Add		-	v
		Carl Cor	anue	

Figure 38. User Credentials

15. There is option to remove the added credentials. To remove, select the added credential and click on the **Remove** button.

Collection for	Configuration Wizard			SID12345-Tes	٥	
	User Credentials					
	Please provide the user	names and passwords to access the HM	I nodes for data collection			
	Selected IP Range					
	172.16.12.10 To	172.16.12.11				
	User Crendentials		User Crendentials for Full Access			
	User Crendentials User Name		User Crendentials for Fall Access			
	User Crendentials User Name		User Creedestals for full Access			
	User Crendentals User Name Partneted		User Creadentials for Full Access			
	User Creadentails User Tourne Passend		User Createntials for Full Access			
	User Cresdentals User Name Patiented		User Crendentials for full Access			
	User Createrisate User Name Passed		User Crendentials for Fail Access	Ratore		

Figure 39. User Credentials

16. If the 800xA system is configured with AC 70, 110, 160 connect, the below input screen for AC 70, 110, 160 appears. Click the **Browse** button to select the AC 70, 110, 160 project export folder. Once the project export folder is selected, all the available project export (.BAX) files are listed under Available section. The most recent export (.BAX) file is auto selected and is listed under Selected section. There are options to move the export files from Selected section to Available section and vice versa. Move the required export files to Selected section and click Continue to proceed (Refer to Appendix D, System configuration export for exporting system configuration files.).

ABB My Control System - D	Data Collector						-	٥	×
III Collection for	Configuration Wizard	a					SID12345-Test	0	i
	AC 70, 110, 160 Inputs Export your AC 70, 110, 16	s	the file in below window						
	File Browser	esidopilinput files/AC100 files					Browse	1	
	Available				Selected				
	File Name	File Path	Date & Time		File Name	File Path	Date & Time	1	
	10_3_9801.8AX	C Users'800xaservice/De	2/6/2009 6:52:32 AM	2	10_3_08_TS01.BAX	C.W.Isers\800xaservice/De	8/3/2011 3:24:26 AM	1	
	10_3_9Q01.BAX	C:/Users/800xaservice/De	10/3/2007 10:31:38 PM	1000				1	
	10_3_HC01.BAX	C 'Users'800xaservice'De	12/18/2008 3:34:28 AM	>>				1	
	10_3_R501.BAX	C:\Users\800xaservice\De	9/12/2007 3:32:16 AM					1	
	10_3_TK01.BAX	C 'Users'800xaservice'De	9/12/2007 3:32:24 AM	**				1	
								1	
				<				1	
								1	
								1	
							Back Co	nănue	1

Figure 40. AC 70, 110, 160 Inputs

17. If the 800xA system is configured with Freelance connect, the below input screen for Freelance appears. Click on the **Browse** button to select the Freelance project export folder. Once the project export folder is selected, all the available project export (.csv/.csvs) files are listed under Available section. The most recent export (.csv/.csvs) file is auto selected and is listed under Selected section. There are options to move the export files from Selected section to Available section and vice versa. Move the required export files to Selected section. If the selected project export file type is .csvs, project export file decryption key has to be provided in the decryption key field (refer to Appendix D, System configuration export for exporting system configuration files).

n for	Configuration Wizard						SID12345-Debug Collection
	Freelance File Input 📀						
	Prozos selectifie a	equired Fireforce project export file(1) bet	to repressing continue.				
	File Drowser						
	Drowne The He						Browse
	Available				elected		
	File Name	File Path	Date & Tase	181	file Name	Decryption Key	Date & Time
				100			
				100			
				190			
				18			
	Engineering Node Detail(s)						
	Engineering Client IP						
	User Name						
	Password						
		~20					
	Engineering Client IP User 1	iarre Password					

Figure 41. Freelance Input

18. Engineering node IP: Scroll down the screen to enter the Engineering client node IP, user credentials and click Add.

						\$1012345.0e	
CI PROB SHELLOW	надатной тэмнаятор раздых корлагтанор) и	erzen preskenig szinkinke.					
File Browser							
Boxto de lla							
Available			54	lected			
File Name	File Path	Date & Time		File Naroe	Decryption Key	Date & Time	
			2				
			390				
			166				
			197				
Engineering Node Detail(s) Engineering Client IP		j					
User Name							
Password		1					
	2.04						
Engineering Client# User	Name Password						
Engineering Client IP User	Name Password						
Engineering Clienti# User	Name Password						
Engineering Client# User	Name Password						

Figure 42. Engineering node IP
- 19. If the 800xA system is configured with Melody Rack connect, the below input screen for Melody Rack appears. Provide the below inputs and click Continue to proceed (refer to Appendix D, System configuration export for exporting system configuration files).
 - a. Melody Island Devices Click the **Browse** button to select the Melody Island Devices Export file
 - CSE_Conf File
 Click the Browse button to select the Current CSE_Conf File
 - c. Asset Export Folder Click the **Browse** button to select the Asset Export Folder
 - d. Composer Melody node IP Address Enter the IP Address of S+ Engineering Server, where Composer Melody is installed.
 - e. UserName Provide the Composer Melody node user name
 - f. Password Provide the Composer Melody node password

ABB My Control Sy	stem - Data Collector			
E Collection for	Configuration Wizard	SID12345-Test	0	i
	Meledy Fack 📀			
	Moledy Island Decises Environment (2000)	÷		
	CSE_Conf Bin Conference_Conf			
	Asset export bidar Unification			
	Explorering Server 172 - 16 - 4 - 20			
	Usurilame Administrator			
	Password			
		Bidk Cor	ntinue	

Figure 43. Melody Rack

20. If the 800xA system is configured with MOD 300 connect, the below input screen for MOD 300 appears. Click the **Browse** button to select the latest ATF file, taken from AdvaBuild engineering node. Click **Continue** to proceed (refer to Appendix D, System configuration export for exporting system configuration files).

ABB My Control Sy:	stem - Data Collector	-	ø	×
Collection for	Configuration Waard	SID12345-Test	0	i
	MO0 308 🕢			
	Select the Latest ATF Bit from the Advant Build engineering tool. C Users 3Dbannaler Central Input free 300000, ATFRee 3000, 58, 41, 798 Prome			
		Badt	Continue	

Figure 44. MOD 300

21. If the 800xA system is configured with QCS connect, the below input screen for QCS appears. Select the relevant QCS version in the QCS Version drop-down list. The correct version should already have been identified, if MCS-DC is running on a computer that has the QCS software installed. Verify the identified QCS version.

ABB My Control System - D	Data Collector								-	ø ×
E Collection for	Configuration Wizard								SI035104-Syed	0 i
	QCS Inputs									
	QCS Version									
	-									
	6.1 SP3 RU1			*						
	File Browser									
	C Rulds input Res_Tester	rgiQCS_JOconfig files						Froute		
	Available					Selected				
	File Name	File Path	Date & Time			File Name	File Path	Date & Time		
	joconfig_QCS22.xml	C:Builds/inputFiles_Test	426202333125 PM	-	2	joconfig.xml	C1Eurld/ImpuFiles_Tests	7/3/2921 11:12:06 PM		
	joconfig_QC523.xml	C'Builds/inputFiles_Test	426202333125 PM		20					
	joconfig_QC524.xml	C:Builds'inputFiles_Test.	6/15/2023 3:19:09 PM	_	1941					
	joconfig_QC525.xml	C'Builds'inputifies_Test	6/11/2023 9:24:27 PM							
	joconfig_QCS26.xml	C:Builds'inputFiles_Test	6/11/2023 9:24:53 PM							
	joconflg_QC527 xml	C:Builds'inputFiles_Test	6/112023 9:25:23 PM							
	joconfig_QC528.xml	C:@uilds/inputFiles_Test	6/112023 9:25:52 PM		<					
	joconfig_QC529.xml	C:BuildrinputFiles_Test	6/11/2023 9:27:02 PM	*						
									Back	Continue

Figure 45. Configuration Wizard

22. Click on the Browse button to select the QCS folder where the latest joconfig.xml files are stored. The joconfig.xml files will be available in the projects directory of the QCS Connectivity Server, which is usually "C:\Program Files (x86)\ABB Industrial IT\Quality Control Solutions\Engineer IT\JOCONFIG \Projects". There will be sub-directories for the different builds that have been created on that QCS system. Select the directory with the most recent build that has been deployed to build the system. Once the folder is selected, all the available joconfig.xml files will be listed under Available section. The files can be moved from the Selected section to the Available section and vice versa. Move the required files to the Selected section. Click Continue to proceed.

Configuration Wizard								\$1035104-Syed	
QCS Inputs									
QC 5 Version									
6.1 SP3 RU1			٧						
File Browser									
C Wulds Prpub Res_Tester	giQCS_JOconfg files						Browse		
Available					Selected				
File Name	File Path	Date & Time			File Name	File Path	Date & Time		
joconfig_QCS22.xml	C:Builds'inputFiles_Test	4262023 3 31.25 PM	-	3	joconfig.em/	C'Euldrings/Files_Teste	7/3/2921 11:12:06 PM		
joconfig_QC523.xml	C:Builds/inputFiles_Test	4/26/2023 3:31:25 PM		1921					
joconflg_QC\$24.xml	C:Builds'inputFiles_Test.	6/15/2023 3:19:09 PM	1	11					
joconfig_QCS25.xml	C'Builds/inputFiles_Test	6/112023 9:24:27 PM							
joconfig_QCS26.xml	C:Builds'inputFiles_Test	6/11/2023 9:24:53 PM							
joconflig_QC527.xml	C:BuildsVinputFiles_Test	6/112023 9:25:23 PM							
joconfig_QC528.xml	C:Builds'inputfiles_Test	6/112023 9:25:52 PM		<					
joconfig_QC529.xml	C:Builds\inputFiles_Test	6/11/2023 9:27:02 PM	*						

Figure 46. Browse option to browse joconfig.xml

23. Once all HMI and connect inputs are provided, it is required to acknowledge that all the prerequisites for data collection, are met. For this, click the tab Prerequisites and confirm each prerequisites by checking the check box against them. Please note, this is only an acknowledgment that user has verified all the prerequisites for proceeding with data collection. For more details, refer Section 2, Prerequisites.

Collection for	Configuration Wizard		SID35104-SarFree	0	
	Piezza continu al the following principalistics after complying. River prerequisities section of MCSDC user manual for detailed procedure				
	Prenquistes	Confirmation			
	 Verify that Microsoft. Net Framework 2.0 Senice Pack 1 or above is installed on all nodes for which data have to be collected. 				
	Start "Windows Management Instrumentation" service from services of it is not already running on all nodes.				
	Enable Windows Management Instrumentation (WIM) in windows frewall exception list on all nodes.				
	Confirm if the administrator privileged user credentials of all nodes are provided as input for this collection.	- E			
	Verify that PPA is nunning on the current node (MCS Data Collector Isunch node).				
	I read, understood and accept the terms and conditions described on the end user license agreement (EULA) of this product, (EULA can be opened from information window).	E			
	All prerequiates related to selected controller(s) are met.	E			
	Note: Please make sure to revert the prerequisite changes back to original statevalues, after the colloction process is complete.				

Figure 47. Configuration Wizard

24. Progress bar is shown to indicate the scanning progress.

ABB My Control System - D	ata Collector	÷	σ	×
Collection for	Configuration Wizard	SID12345-Test	٥	i

Figure 48. Progress

25. Once the scanning is complete, all the available HMI and controller nodes are listed. If the HMI nodes are fully accessible, it is shown as Yes in Full Access field. If the nodes are not fully accessible, it is shown as No in Full Access field. This may be due to issues such as invalid user credentials, IP not reachable, network issues, etc. For not accessible nodes, possible reasons for non-accessibility will be provided in the remarks field. User can fix the issue and perform a re-scan. To do a re-scan, click on the **Back** button and repeat the scan. There is an option to add new credentials by clicking on the **Add Credentials** button. When a new credential is added, failed nodes are re-scanned. To proceed with data collection, click on the **Continue** button.

Collection for	Configuration	n Wizard								SID12345-Test	٥
	Node details	0									
	Successfully Sc	anned 4 Compute	613								
	Device Name	Device Type	Node Identification	Full Access	IP Address #1	IP Address #2	IP Address #3	IP Address #4	Remark		
	6101ASCS1										
	6101ASCS2	Computer	Node Admin Struc	Yes	172 16 20 72				172 16:20.72		
	6XDC1	Computer	Node Admin Struc.	Yes	172.16.20.11				172.16.20.11		
	6XDC2	Computer	Node Admin Struc.	Yes	172.16.20.12				172.16.20.12		
	Controller_2ū	Controller	Node Admin Struc.	Yes	172.16.80.51				IPs: 172.16.80.51		
	10_3_9B_T	Controller	Node Admin Struc	Yes							
	Rescan can be do	ne after flying the is	soues of tailed systems mer	tioned above							

Figure 49. Node Details

26. Collection screen appears and data collection is started. Data collection progress is shown in the progress bar. During the data collection if the user wants to cancel the data collection process, click on the **Cancel** button.

E Calertee by	Z Configuration Waard		SIMSIAL O
al 800xA (6.1.1)	Collection 🕜		
- v6114SCS Success - v6114DW In Progress - v6114DC Not Started	Current Node Data Co	ection Pregress 📀	
	Overall Data Collection	Progress 🕢	
	Elapsod Tene 00:07:08		Cancel Collection
	Status Log 😡		
	Time	+ Lops	
	2021-09-21 07:18 42	V011-OW. Collection of custom query data points started	
	2021-09-21 07:18:42	V611-OW. Collection of Registry data points completed	
	2021-09-21 07:18:42	V611 OW: Collection of Repistry data points started	
	2021-09-21 07:18 #2	V611-OW: Collection of INMI data points completed	
	2021-00-21 07:18:42	V611-OW. Collection of HMI data points started	
	2021-09-21 07:18:41	With-OW Collection started	
	2021-09-21 07 18 41	Loading The DII HS3Collector802sA on Machine V611-DI/Successful	
	2021-00-21 07 10 41	Client V511-OX Connected	
	2021-09-21 07:18:26	V011-OW WCF client channel created	
	2021-09-21 07:18 34	Application Launch Type IIMI	
	2021-09-21 07:18:33	Deployment of Agent on Node: 172.16.4.17 is Successful	
	2021-09-21 07:10:33	Copy Type: Simple Copy	
	2021-09-21 07:18 31	Simple File Copy Operation	
	2021-09-21 07:18 31	Deplay Agention Node 172.16 A 17 Started	
	2021-09-21 07:18 31	Completed Collection on Node 172 16 4 16	

Figure 50. Data Collection

27. Node wise progress update is shown on the left pane. Below are the available states based on the node status color code:

Grey: Indicates the data that is yet to be collected in the node.

Blue: Indicates that the data is currently getting collected in the node.

Green: Indicates the data that is successfully collected in the node.

Red: Indicates the data collection is failed in the node.

28. Once the data collection is completed, the collection file is created and stored under output folder (inside the MCS-DC folder). This file can be viewed by clicking on the **Click here for collection file** button.

ABB My Control Syst	em - Data Collector			
III Collection for	Configuration Waard	SID12345-Test	۲	i
🔜 800xA (6.1.0-0)	Collection 🕜			
- VIII-ASCS Success - VIII-OW Success - VIII-OC Success	Current Node Data Collection Progress 👔			1
	Overall Data Collection Progress			
	Elegent Time 00-48:54	Cancel C	ollection	l.
	Data Collection Completed Fait Parts: Circlester/GDP26129(22) 12201213Matter Instal Circlester/GDP26129(22) 12201213Matter Instal Circlester/GDP26129(22) 12201213Matter Instal Circlester/GDP26129(22) 1220123Matter Instal	ection file		
	Status Log 👔			63
	Time + Logs			
	2020-06-01 03-20 57 Security data collection is completed		2	-
	2020-06-01 03:20:39 Security data collection is started			
	2020-06-01 03:20:39 Other devices data collection completed			
	2020-06-01 03:20:39 Other devices data collection is started			
	2020-06-01 03:20:39 800xA system data collection completed			

Figure 51. View Collection

29. When the user clicks the **Click here for collection file** button, the collection file folder opens.

Home S	Share	View								~
								in the second		
-) · T	/ This	C / Local Disk (C:)	 Users / autoxaservice / Desktop 	5PDC2.0 (2.0.1911.0600	7) / Master Install /	Output	~ 0	Search Output		
0.11		Name		Date modified	Туре	Size				
Quick access		SID12345_20191	107_1312_800xA_AC800M_PLSC	11/7/2019 1:47 PM	Compressed (zipp	607 KB				
Downloads	2									
Documents	2									
Dictures	2									
Loge	~									
Logs										
Logs										
This PC										
m									D	

Figure 52. Collection Folder

3.3.2 Basic mode data collection for Freelance

- 1. Deploy MCS-DC in the hard drive (Operating System partition) of the node from which data collection must be executed. MCS-DC can be launched from any Freelance node.
- 2. Double-click the **MCS-DC_Launcher.exe**, to launch the tool. It is present inside the unzipped MCS-DC folder. The initial screen appears as shown in Figure 53. MCS-DC tool runs the below checks on the launch node. If the checks are passed, a Green tick mark is shown, click the **Launch** button to proceed with data collection. If the checks fails, a Red cross mark is shown, user has to fix the issue and launch the MCS-DC tool again.

Al	B	My	Control	System - Data Collector					×
1				Contraction of the			τ.		1
				MC	S-DC				
						?			
				.Net version check	0				
				User privilege check	0				
				Disk space check	0				
				MCS-DC launch drive check	0				
				New collection	O Merging of data files				
				Close Ø	Launch →				
· · · · ·									

Figure 53. Launch Node Checks

• .NET Framework version check.

If the .NET Framework version is 1.1 or above, then this check is passed and MCS-DC 2.X version can be launched for data collection.

If the .NET Framework version is lower than 1.1, then this check is failed and MCS-DC 2.X version cannot be launched for data collection, instead MCS-DC 1.9.x version will be launched for data collection. Please refer MCS-DC 1.9.x user manual for data collection procedure.

• Prerequisites check

Below prerequisites are validated. User can proceed for data collection only if these checks are passed.

a) User Privileges Check, checks if the MCS-DC Tool is launched in the user account with administrator privileges.

b) System drive launch check, MCS-DC tool should be launched only from the local disk drive of the launch node.

c) Required Disk Space Check, Free disk space of 500MB should be available on the disk drive from which the MCS-DC is launched.

3. Provide the System ID of the Freelance system and your full name and provide password for encryption. This password will be used for encrypting collected data and create system data file. Decryption of the collected data is possible only at 3 places, namely, My Control System web, My Control System On-premise and My Control System Portable. To use the system data file at My Control System Portable, the user needs to enter the same password, which is entered here, to decrypt the data. So, remember this password. Once all the required inputs are provided, select Basic Mode (default selection). Upon clicking on the Scan button, validation of System ID and Collected by fields are executed. Tick mark appears if validation succeeds and cross marks appear when validation fails against respective fields. Correct the errors and click on the Scan button to proceed further.

	System ID () Please re-enter the password	?
0	SID1234	
	Collected By	
0	test	
	Provide password for encryption (Enter between 8-16 character)	
0	*****	۲
	Re-enter password	
	*****	0
	Basic Mode Advanced Mode	
1	n the basic mode, MCS-DC will detect the system automatically. Basic mode is not supported for 5- operations, 800xA and Freelance are supported. But 800xA with Harmony or Procontrol P13 environment of the section o	

Figure 54. Login

4. Clicking on the **Scan** button initiates system scan by MCS-DC which results in identification of HMI, Controllers and System Version of that Freelance system. Progress bar is shown to indicate the status of the scanning.



Figure 55. Scan Progress

5. After the scan is successfully completed, details of HMI, Controllers and System Version are displayed.



Figure 56. Detected System

- 6. Below are the supported controllers related to Freelance HMI:
 - Freelance
- 7. Below are the supported data category options for Freelance HMI:
 - Performance
 - Lifecycle
- 8. Below are the supported data category options for Freelance Controller:
 - Performance
 - Lifecycle
- 9. Refer below, the required inputs for each system.



For procedure on exporting system configuration files, Refer Appendix D, System configuration export.

Freelance HMI:

- IP range (to scan and detect non-Freelance nodes)

– Admin user credentials to access all computer nodes. If the customer project file type is .csvs, user has to provide the customer project decryption key

- File location of customer project (.csv/.csvs file)

Freelance controller:

- File location of customer project (.csv/.csvs file). If the customer project file type is .csvs, user has to provide the customer project decryption key

10. Clicking on the **Continue** button will take to Configuration wizard where the user needs to provide necessary input parameters required for data collection. The first input screen is Freelance File Input.

Users can switch the collection mode from basic to advanced, by clicking 'Switch to Advanced mode' button.

11. Click the **Browse** button to select the Freelance project export folder. Once the project export folder is selected, all the available project export (.csv/.csvs) files are listed under Available section. The most recent export (.csv/.csvs) file is auto selected and is listed under Selected section. There are options to move the export files from Selected section to Available section and vice versa. Move the required export files to Selected section and click on **Continue** to proceed. If the selected project export file type is .csvs, project export file decryption key has to be provided in the decryption key field (refer to Appendix D, System configuration export for exporting system configuration files).

ABB My Control System - D	iata Collector							•	a x
E Collection for	🎢 Configuration Wicard							\$1075±90.v	© i
	Freelance File Input 🥑								
	MOEDC association	e labout Presiliance project export the ReadConico	Norffedslave cov. This is selected	i for dala collect	on If Bis I	s not the inferried selection, gloase select the	a appropriata filo(s)		
	File Browser								
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	Available					Selected			
	File Name	Rile Path	Date & Time			File Name	Decryption Key	Date & Time	
	Singlecontroller_NonRedslave.cox	C Program Files (d8)(488) industrial IT	11/25/2021 11:53:42 AM	-	>	RedCordsRistRedsIne.cs/	1924	12/0/2021 10:50 43 AM	
	SPOC23Bask.cov	C.Program Files (d8)/488 industrial IT	11/17/2021 11:58:52 AM						
	Red_Ber_Red_Slave.cov	C.Program Files (d80)480 industrial IT.,	11/9/2021 6:02:07 PM		23				
	Red_Ber_Non_Red_Blave.cov	C:Program Files 0/380488 industrial IT.,	11/9/2021 6:00:46 PM						
	Non_Red_Prim_Red_Stave.cov	C.Program Files 03(0488 industrial IT.,	11/9/2021 5:57:31 PM						
	Non_Red_Prin_Non_Red_Stars.cov	C.Program Files (v86)/488 industrial IT.,	11/9/2021 5:54:01 PM	_					
	22Regression.cov	C1Program Files (v86(v88) industrial IT.,	10/8/2021 4:24:09 PM						
	ParametersCheck.cov	C.Program Files (d6(V&B) industrial IT	7/28/2021 4:22:57 PM		<				
	<u>.</u>	A100 P1 1.4A41400.1.1.1.1.0P		u sč					
								Back Corro	148

Figure 57. IP Range Input

12. All HMI and controller nodes will be detected by MCS-DC from the .csv/.csvs file of the customer's project and their respective IP's will be read automatically. Enter only the range of IP's related to other computers, where MCS-DC needs to collect data. This is only an optional input. If there are no IT assets, other than HMI and Controller nodes, user can proceed without providing IP range.

my Control s			<u> </u>	
lection for	Configuration Wizard	SID12345 Test	٢	
	IP Range Input 🕜			
	The IP(s) of HMI and Controller(s) nodes will be read automatically. Enter only the range of IP(s) related to other IT Assets like Configuration.	e Network Printers, Switches, Routers and other computers that are not part of		
	Device Name			
	Device Name			
	Add			
	Added IP Range 🔞			
		Remove	6 - C	

Figure 58. IP Range Input

13. Provide the IP range and click on **Add** button. User can provide multiple ranges too. Larger the range of IP's, more time will be taken by MCS-DC to complete the node scan. Hence, it is better to provide specific range related to required computers.



Figure 59. IP Range

14. If a wrong IP range is added, there is option to remove that. To remove, select the added IP range by clicking on it and then click on the **Remove** button.

Collection for	Configuration Wizard	SID12345-Test	0	1
	IP Range Input 🥝			
	The IP(s) of H& and Controller(s) nodes will be read automatically. Enter only the range of IP(s) related to other IT Assets is Configuration.	e Network Printers, Switches, Routers and other computers that are not part of		
	Device Name			
	Device Name			
	Add			
	Added IP Range 👔			
	172-16-12-10 To 172-16-12-11			
		Remove		

Figure 60. Remove IP Option

15. Click on the **Continue** button to proceed. There is an option to go back to the previous window in each step of the configuration.

16. Next input is user credential. Provide user name and password in the format 'computer name\username'. Alternatively, select a user account from the drop-down list that has the necessary privileges for data collection. The required user privileges are outlined in Section 2.5, Prerequisites. Click the Add button.

ABB My Control Syste	m - Data Collector	-	۰	×
E Collection for	Configuration Wizard	SID12345-Test	٥	i
	User Credentials 👔			î
	O Plasse provide the user names and passworth to access the HMI reduct for stals collection			
	Selected IP Range			
	172 16 12 10 To 172 16 12 11			
	User Crendentials for Full Access			
	Usertaine			
	Passord			
	Add	Back Cor	ntinue	Ŷ

Figure 61. Freelance Folder

17. There is option to remove the added credentials. To remove, select the added credential and click on the **Remove** button.

My Control System - Data Collector	-	٥	,
Configuration	SID12345-Test	٥	
Input			
reelance			
IP Range Scan	New User Credentials		
Enter only computer IPs. Never enter controllers IPs here.	UserName		
Start IP address	Decement		
EndiP address	P 455 MOTO		
451	Add		
Scanned IP Range	User Crendentials for Full Access		
172.16.12.10 To 172.16.12.11	administrator :		
Remove	Remove		
	Back C	ontinue	

Figure 62. Remove Credentials

18. Once all HMI and connect inputs are provided, it is required to acknowledge that all the prerequisites for data collection, are met. For this, click the tab Prerequisites and confirm each prerequisites by checking the check box against them. Please note, this is only an acknowledgment that user has verified all the prerequisites for proceeding with data collection. For more details, refer Section 2, Prerequisites.

collection for	Configuration Witcard		SI075898.v
	Please confirm all the following prerequisites after complying. Refer prerequisites section of MCSOC user manual for detailed procedure		
	Brenaider	Conference	
	Veily that Microsoft Net/Framework 2.0 Service Pack 1 or above is installed on all nodes for which data have to be collected.	F	
	Turn on File and Phintee sharing for all network profiles on all nodes.	P .	
	Stat "Serve" service it is not siteady suming on all nodes.	P .	
	Stat "h/indows Wonagement End/unsentation" services it it is not alreadynaming on all nodes.	R	
	Cessle'1.coal-countTokenFilterFolicy" registry kay on all nodes.	9	
	Enable Windows Management Instrumentation (wHH) in windows ferwall exception list on all nodes.	4	
	Continuit the administrator privileged user credentials of all nodes are provided as input for this collection.	P	
	Certim if the WCSCC is launched on Fiselance Engineering client node.	P	
	# I mad, understood and accept the terms and conditions described on the end user interse agreement (EULA) of this people's EULA can be operated into information window)	P	
	Note: Please make size to resert the processible charges lack to organization because, after the collection process is complete.		
	Note: Please make sure to more the perceptions charges back to original statisticates, after the collection process is complete.		
	Note: Please mate sore to most the perceptible charges back to original statestates, after the callecting process is complete.		
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	Note Please node size to most the perceptible charges lack to ergonal statisticates, after the collective process is complete.		
	Note: Please make sur 16 ment für gemegalate charges lack to argund statisticates, after the collectine process is complete.		
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	Nets: Please main sure to meet the perceptible changes back to erginal statisticates, after the collectine process is complete.		
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	Note Please make some to more the purrequisite chargen lack to original statisticates, after the collection process is complete.		
	Water Places make sure to somen the perroquidite charges lack to original statisticates, after the collectine process is complete.		

Figure 63. Configuration wizard

19. Click on the **Continue** button to proceed with the node scan.

20. Progress bar shows the scanning progress.

ABB My Control System -	Data Collector		σ	×
III Collection for	Configuration Wizard	SID12345-Test	٥	i
	Ensation the surface for IAM and Postellar anden			
	it may take a while to complete			
	Please wat			

Figure 64. Scanning Progress

- 21. Once the scan is complete, all the available HMI and Controller nodes get listed. If the HMI nodes are fully accessible, it is indicated as **Yes** in the Full Access field. If the nodes are not fully accessible, it is indicated as **No** in the Full Access field. Possible reasons for non-accessible nodes could be invalid user credentials, IP not reachable, network issues, etc. The remark field shows the reasons for non-accessible nodes. User can fix the issue and perform a rescan. To perform re-scan, click on the **Back** button and repeat the scan. User can add new credentials by clicking on the **Add Credentials** button. It allows user to re-scan the failed nodes with a new credential. To proceed with the data collection, click on the **Continue** button.
- 22. In the next step collection screen will appear and data collection gets started. Data collection progress is shown in the progress bar. During the data collection if the user wants to cancel the data collection process, click on the **Cancel** button.

23. Node wise progress update is shown on the left pane. Below are the available states based on the node status color code:

Grey: Indicates the data that is yet to be collected in the node. Blue: Indicates that the data is currently getting collected in the node. Green: Indicates the data is successfully collected in the node. Red: Indicates the data collection is failed in the node.

Collection for		✗ Configuration Wizard		\$1075190.w	٥
Freelance (V10.1)		Collection 🕜			
- ACBOF1 - AC700F2 - PS3 - AC900F4	Not Started Success Success Not Started	Current Node Data Cel	Bleedan Progress		
- ACEDERS	In Progress	Overall Data Collection	n Progress		
- ACEOGERS	Not Started				
- ADMINPC - FREELANCE.PC	Not Started Not Started	Elepsed Time 00:00.08		Cancel	Collection
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		Time	• Logs •		
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Figure 65. Scan Progress

24. Once the data collection gets completed, the collection file is created and stored under output folder (inside the MCS-DC folder). This file can be viewed by clicking on the **Click here for collection file** button.

		✗ Configuration Weard		\$1075490.v	٢	i
🛁 Freelance (V10.1)		Collection 2				
- AC800F1 - AC700F2	Not Started Success	Current Node Data Collection Progress				
- PS3	Success					
- AC\$0014	Not Started					
- ACEODIS	Success	Overall Data Collection Progress				_
- ACEODIFIS	Not Started					
- ADMINIC	Success	Elepted Time 00:07:20				
- HOLLANCE PC	Seccess			Cancel	Collection	n
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			Lands_2.7.MICIDO 2.3_2.3.02112.03020Master InstallinougustS007541			
		Status Log	une_23MCIDC23_2323112 ED000Meer1mtanOutputBET340			
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Figure 66. Collection File

25. After clicking on the **Click here for collection file** button, the collection file folder will open.

		Come .			
🕞 🕞 - 法 > Comput	er → Local Disk (C:) → Users → Administrator → Desktop	SPDC2.0_2.0.1910.21007 Master Install Output		• 49 Search Output	Q
File Edit View Tools	Help				
Organize 👻 Include i	n library 🔹 Share with 👻 Burn New folder				 0
🙀 Favorites	Name	Date modified	Туре	Size	
Desktop Downloads Recent Places Documents Music Filtures Videos	2012345_20191108_0919_Freelance_Freelace_PL	11/8/2019 9-41 AM	WinZip File	169 KB	Select a file
i Computer					to preview
1 item					

Figure 67. Collection Folder

3.4 Advanced Mode Data Collection

3.4.1 Advanced Mode Data Collection Process for 800xA HMI

- Deploy MCS-DC in the hard drive (Operating System partition) of the node from which data collection must be executed. Depending on the HMI/Controller, MCS-DC launch nodes may vary. For 800xA HMI data collection, the MCS-DC tool can be launched on any 800xA node. Based on the controllers that must be collected, the suggested launch node may vary:
 - 800xA HMI with AC 800M controllers:
 - a) LCS: Any 800xA node
 - b) Performance: Any 800xA node
 - 800xA HMI with AC 70, 110, 160 controllers:
 - a) LCS: Any 800xA node
 - 800xA HMI with Freelance controllers:
 - a) LCS: Any 800xA node
 - b) Performance: Any 800xA node
 - 800xA HMI with AC 410, 450, MP, SG 400 controllers:
 - a) LCS: Any 800xA node
 - b) Performance: Any 800xA node
 - 800xA HMI with Melody Rack controllers:

a) LCS: Any 800xA node which is part of Onet network. Additionally CSE_Config has to be synchronized in all the 800xA nodes

b) Performance: Any 800xA node which is part of Onet network. Additionally CSE_Config has to be synchronized in all the 800xA nodes

• 800xA HMI with Harmony controllers: If Harmony engineering node is not part of 800xA node admin structure, HMI and controller data must be collected separately and to be merged. Refer to Section 4.1, Post Collection Procedure for more details.

a) LCS (For Harmony Rack modules): Node in which Composer Harmony is installed (Harmony Composer project .ebp is present) b) LCS (For Symphony DIN): Any node which has HAPI installed and reachable through control network (recommended Composer Harmony node)

c) Performance (Controller): Any node which has HAPI installed and reachable through control network (recommended Composer Harmony node)

d) Performance\LCS (800xA) : Any 800xA node

• 800xA HMI with MOD 300 Controllers:

a) LCS: Any 800xA node

• 800xA HMI with Procontrol P13 controllers:

a) LCS: Any 800xA node

- 800xA HMI with QCS controllers:
 - a) LCS: Any 800xA node

2. Double-click on the MCS-DC_Launcher.exe, to launch the tool. It is present inside the unzipped MCS-DC folder. The initial screen appears as shown in Figure 68. MCS-DC tool runs the below checks on the launch node. The Green tick marks refer to successful checks, click on the Launch button to proceed with data collection. If the check fails, a Red cross mark will indicate the same. User must fix the issue and re-launch the MCS-DC tool.

A	B	•	My	Control Sy	stem - Data Collector	×
1		1			A REAL PROPERTY AND A REAL	т. т.
					MCS-DC	
					0	
					.Net version check	
					User privilege check	
					Disk space check 🥝	
					MCS-DC launch drive check	
					New collection Merging of data files	
					(Close ⊘) Launch →	
· .						

Figure 68. MCS-DC Launcher

.NET Framework version check

.NET Framework version 1.1 or above is required to pass this check and Launch MCS-DC 2.X version for data collection.

If the .NET Framework version is lower than 1.1, this check will fail and user will be unable to launch MCS-DC 2.X version for data collection, instead MCS-DC 1.9.x version will be launched for data collection. Please refer to MCS-DC 1.9.x user manual for data collection procedure.

• Prerequisites check

Below prerequisites needs to be validated. User can proceed with data collection only if these checks are passed.

a) User privileges check, checks if the MCS-DC Tool is launched in the user account with administrator privileges.

b) System drive launch check, MCS-DC tool should be launched only from the local disk drive of the launch node.

c) Required Disk Space Check, Free disk space of 500MB should be available on the disk drive from which the MCS-DC is launched.

3. Provide System ID of the 800xA system first, your full name in the collected by filed next and set password in the provide password for encryption field. This password will be used for encrypting collected data and create system data file. Decryption of the collected data is possible only at 3 places, namely, My Control System web, My Control System Onpremise and My Control System Portable. To use the system data file at My Control System Portable, the user needs to enter the same password, which is entered here, to decrypt the data. So, remember this password. Once all the required inputs are provided, select Advanced Mode. Upon clicking on the OK button, validation of System ID and Collected by fields are executed. Tick mark appears if validation succeeds and cross marks appear when validation fails for respective fields. Correct the errors and click on the OK button to proceed further.

	System ID	?
0	SID1234	
	Collected By	
0	test	
	Provide password for encryption (Enter between 8-16 character)	
0	*****	۲
	Re-enter password	
	******	۲
	Basic Mode Advanced Mode	
li	n the basic mode, MCS-DC will detect the system automatically. Basic mode is not supported for s+ operations. 800xA and Freelance are supported. But 800xA with Harmony or Procontrol P13	

Figure 69. User Credentials

- 4. In the next step configuration screen will appear. User needs to select applicable HMI/controllers and data category (like Performance, Life cycle, etc.) on this screen. Supported HMIs are listed on the left half of the screen. When a HMI selection changes, the related applicable controllers appear on the right half of the screen. Default selection of HMI is 800xA. To change the selection, click on the name of the HMI. Selected HMI is highlighted in Blue.
- 5. Below are the supported controllers related to 800xA HMI on this release:
 - AC 800M
 - AC 800PEC
 - AC 70, 110, 160
 - Freelance
 - AC 410, 450, MP, SG 400
 - Melody Rack
 - Harmony
 - MOD 300
 - Procontrol P13
 - QCS
- 6. Below are the supported data category options for 800xA HMI:
 - Performance
 - Life cycle
 - Software
 - Security (Cyber security)

- 7. Below are the supported data category options for the controllers:
 - AC 800M:
 - a) Performance
 - b) Life cycle
 - AC 800PEC:
 - a) Life cycle
 - AC 70, 110, 160:
 - a) Life cycle
 - Freelance:
 - a) Performance
 - b) Life cycle
 - AC 410, 450, MP, SG 400:
 - a) Performance
 - b) Life cycle
 - Melody Rack:
 - a) Performance
 - b) Life cycle

- Harmony:
 - a) Performance
 - b) Life cycle
- MOD300:
 a) Life cycle
- Procontrol P13:

a) Life cycle

• QCS:

a) Life cycle

ABB My Contro	ol System - Data C	ollector						-	ø	×
Configuration								SID12345-test	۵	i
HMI System 🕜					Controllers 🔞					
	Performance	Lifecycle	Software	Security		Performance	Lifecycle			
800×A					AC 880M					
Freelance					AC 70, 110, 160					
S+ Operations					Freelance					
					AC 410, 450, MP, SG 400					
					Melody Rack					
					MOD 300					
					Harmony					
					Precentrel P13					
					QCS					
								Ce	intriue	

Figure 70. Data Collection
8. Select the required data category for HMI and controller and then click on the **Continue** button to proceed. Select Cyber Security option only when it is needed as it will take significantly longer time for data collection. A typical selection is shown in Figure 71. Please note, data collection for AC800M controllers should only be done along with an HMI.

	trol System - Data	Collector							D	
Configuration								SID35104-eete	٢	i
HMI System 🕜					Controllers 🕜					
	Performance	Lifecycle	Software	Security		Performance	Lifecycle			
800xA	\checkmark	>	~	V	AC 800M	>	>			
Freelance					AC 800PEC					
S+ Operations					AC 70, 110, 160		>			
Non-ABB System					Freelance		V			
					AC 410, 450, MP, SG 400		V			
1					Melody Rack					
					MOD 300		>			
					Harmony		~			
					Procontrol P13		~			
					QCS		>			
<				>						
								Co	ntinue	



9. Input configuration screen appears. The type of required inputs may vary based the HMI, controller and data categories, selected in the previous step. If user selects AC 800M and Advant Master (AC 410, 450, MP, SG 400) but do not select 800xA HMI, then no input is required and user can skip this screen. After the data category selection, collection screen appears.

10. Refer below for the required inputs of each system:



For the procedure on how to export system configuration files refer to Appendix D, System configuration export.

- 800xA HMI: IP range (to scan and detect non-800xA nodes) Admin user credentials to access all computer nodes.
- AC 800M controllers:

No input settings are needed for collecting performance and life cycle data from AC800M controllers. However, controller crash files (logs) will be collected from primary as well as redundant AC800M connectivity server, for which, users can set the maximum size of the collection file. Click on settings (the gear icon on the top right corner) and select the tab AC800M. From drop down menu, select the maximum size for the collection file. Crash file collection is enabled by default with a maximum file size of 15MB. Crash file collection can be disabled by unchecking the provided check box.

By default, AC800M controller data is collected by MCS-DC using AfwOPCDASurrogate service. As this is a licensed service, if the license is not present in the system, an error message will be displayed in all HMI nodes. Alternatively, users may choose ABB.AfwOpcDaServer service instead, by selecting the drop-down menu shown below.

The collection of AC 800M lifecycle data from a system with a large number of control structure objects (for e.g a large number of redundant IO modules) may time out in certain rare cases. Users are advised to uncheck the option 'Collect redundant devices' in such cases and proceed with the collection process.

3 Data Collection Process Advanced Mode Data Collection Process for 800xA HMI

ABB	Settings			×
General	Communication	Collection Retry	AC 800M	
Collect A	C 800M crash files			
Crash file m	naximum size 15	✓ MB		
OPCServer	ABB.AfwOpcDaSur	rogate.1 🗸		
Collect re	edundant devices (disable	this in case of large numb	er of devices on	control structure)
			Apply	Cancel

Figure 72. AC 800M data collection settings

- AC 70, 110, 160 Controllers: File location of customer project (.BAX file)
- Freelance Controllers: File location of customer project (.csv/.csvs file). If the customer project file type is .csvs, user has to provide the customer project decryption key.
- AC 410, 450, MP, SG 400 Controllers: Controller data collection happens in sequential manner, hence, collection duration per controller needs to be set. See the screenshot below. Minimum time interval that can be set between two controller

collection is 2 minutes and maximum 30 minutes. Higher the duration, more data samples will be available for further calculations.

ABB	Settings		×
General	Communication	AC400	
Collection T	ïme: 30	✓ minutes	
		Analy	
		Appiy Cancel	

Figure 73. Collection Time Interval

- Melody Rack Controllers: Melody Island Devices CSE_Conf File Asset Export Folder Composer Melody node IP Address UserName Password
- Harmony Controllers: Refer to step 20 in this section for more details.

- MOD300 controllers: Latest ATF file from AdvaBuild engineering node
- Procontrol P13 controllers: File location of the latest P13 source file (.CSV). Please note, in the exported P13 Source file (.CSV), the text separator should be double quotes (") and the field separator should be comma (,). For more details refer Appendix C

• QCS controllers:

Latest config.xml files from QCS connectivity server

11. Under 800xA HMI tab, IP range scan input: 800xA nodes that are already part of Node Admin Structure of 800xA system will be detected by MCS-DC. If there are any non-800xA computers that are connected to 800xA system (for example Melody engineering node), user shall enter the IP range of these computers. This is an optional input. If no IP range is entered, then MCS-DC will collect only 800xA HMI nodes.

ABB My Control System - Data Collector			
Generation		SID81441-dhanraj	© i
Contigues inputs and take an "Continua" holton Inputs IRBA. HIMI EXX7 Periodia Catlections Perrequibles Clack Taxeout for motion reachability cincks: 3 • mutate Taxeout for motion reachability cincks: 3 • mutate			
IP Range Scan	New User Credentials 🕜		
Ender professe for produce to the order devices and complete resolution of the area of the	User Name (bits formal domain annehaemane for domain system) Paterood Add		
Scannel P Range	Usar Cindentine for Full Access		
Remov	Renov	Ruck Co	căriut

Figure 74. Inputs

Parallel data collection of client computers: Normally, data is collected serially one computer node at a time in order to reduce the network load. It is, however, possible to collect data simultaneously from multiple client computers to save time. This may, however, result in an increase in the total load on the system, which may impair its performance. Due to this, parallel collection is not recommended during critical plant operations. To execute parallel collection, enable the check box "Enable parallel collection of client nodes". Note that this is an optional setting.

Parallel data collection is not applicable to server nodes. When the check box is enabled, server nodes will be collected sequentially, followed by client nodes in parallel. At most 5 client nodes data will be collected simultaneously.



Parallel collection for 800xA clients will not work if the installed Operating System is Server Operating System.

12. There are several reachability checks are performed during scan. They include but limited to, Ping, Network file copy, WCF communication check, etc. Normally these checks should take only a couple of minutes. However, for slower computers or computers with some performance issues, these may take more time. In some cases, reachability checks may hang if there is no response from OS API calls of the remote computer. So, this time out configuration will help data collector, not to wait for completing the reachability checks, indefinitely. Choose the value wisely as per the system performance levels. For slower systems increase the timeout value. If you are not sure, the default value of 3 minutes should work for most systems.

ABB My Control System - Data Collector		- o ×
Configuration		SID35104-dhanraj 🐵 i
Configure inputs and click on "Continue" button		
Inputs		
Enable parallel collection of client oxice		
Timeost for node reachability checks :		
IP Range Scan 2	New User Credentads 📀	
Enter only the IP's related to network devi 20 uters that are not part of system configuration. Do not includer www.awarotontroller modes.	User Name (in the format domain name/username for domain system)	
Start IP address		
End IP address	Password	
ads.	Add	
Scanned IP Range	User Credentials for Full Access	
Remove	Remove	
		Activate Windows Go to Settings to activate Windows
		Back Continue

Figure 75. Timeout for node reachability check

- 13. Provide the IP range and click on **Add** button. User can provide multiple ranges. If the IP range is large, MCS-DC will complete the node scanning in significantly more time. Hence, it is better to provide specific range related to required computers.
- 14. In case an incorrect IP range is added, there is an option to remove it: select the incorrect IP range by clicking on it and then select the **Remove** button.
- 15. Next input is User Credentials. Provide the Username and Password of an Administrator that can access to all the nodes part of data collection. For nodes in Domain network, the username must be provided in the format of "domain name \ username".
- 16. There is an option to remove the added credentials. To remove, select the added credential and click on the **Remove** button.

17. Click on **Continue** button to provide input for AC 70, 110, 160 controllers data collection, this tab will appear only if AC 70, 110, 160 is selected for data collection in the previous steps. Click on the **Browse** button to select the AC 70, 110, 160 project export folder. After selecting the project export folder, find all the available project export (.BAX) files listed under the Available section. The most recent export (.BAX) file will be auto selected and listed under Selected section. There are options to move the export files from Selected section to Available section and vice versa. Move the required export files to Selected section (refer to Appendix D, System configuration export for exporting system configuration files).

My Control	I System - Data Collector) - (0	,
Configuration								SID35104-SarNWPrimaryDWN	۲	
) Required inp	ut fields have been enabled. Provid	e your inputs on them and (press Continue							
00xA HMI Period	dic Collection AC 70, 110,	160 Freelance	Melody Rack	MOD 308 Harmony	Procentral P13	QCS Prerequisit	es Check			
	-									
C 70, 110, 160 Input	ts 🕜									
Frank	F5 seconds as RAY Fig. and house	No. Bla la hafam mindan								
Export your AG 70,110,1	an property and provide	the low to perfor window								
File Browser										
C Ibuildispdc2 2 Input File	eVAC100 files					Erowy				
							_			
wailable				Selected						
File Name	File Path	Date & Time		File Name	File Path	Date & Time				
10_3_9801.BAX	C /build/spdc2.2Vnput File/ .	7/3/2021 10:42:00 AM	2	10_3_98_TS01 BAX	C-Vouldapdc2.24nput File1.	7/0/2021 10:42:00 AM				
10_3_9001.BAX	C:/build/apdc2.2/input File/	7/3/2021 10:42:00 AM	22							
10_3_HC01.BAX	C:buildspdc2.2%nput File\.	7/3/2021 10:42:00 AM	Lite!							
10_3_R501.BAX	C:/build/spdc2.2/input File/ .	7/3/2021 10:42:00 AM								
10_3_TK01.BAX	C/buildapdc2.2Vnput.File(.	7/3/2021 10:42:00 AM	«							
			<							

Figure 76. Browse Project Export Folder

18. If Freelance Controller category is selected in Step 8, click the Browse button to select the Freelance project export folder. Once the project export folder is selected, all the available project export (.csv/.csvs) files are listed under Available section. The most recent export (.csv/.csvs) file is auto selected and is listed under Selected section. There are options to move the export files from Selected section to Available section and vice versa. Move the required export files to Selected section. If the selected project export file type is .csvs, project export file decryption key has to be provided in the decryption key field (refer to Appendix D, System configuration export for exporting system configuration files).

BB My	Control System -	Data Collector								-		×
Configuration										SID35104-SarNWPrimaryDWN	٥	1
(i) Rec	quired input fields have	been enabled. Provide your inputs	on them and press Continue									
800xA HMI	Periodic Collectio	m AC 78, 110, 160	Freelance Melody Rack	MOD 300	Harmony	Precentrel P13	QCS	Prerequisites Check				
File Browse	er									^		
C.Soundispo	dc2.28nput File/Freelan	ra_OSV							Brow	vso.		
Available					Selected							
	File Name	File Path	Date & Time		F	le Name	Decr	yption Key	Date & Time	_		
new.csv		C:buildspdc2 2Input FileFreel.	10/3/2021 2:55:45 PM	[2]	FL2019SP1F	P1.csv N	KA.	7/3/203	1 10:42:01 AM			
112016.059		G. Ganagood 2 mips, Preview.	3/25/2021 9:12:54 AM	>>						_		
				~								
				1050								
Freelance Engineerin	e Engineering Client ng Client IP 172	Detail[5]	- 31									
User Name	e abb											
Password		1	Add									
Engineeri	ing Client IP	User Name Passa	rord									
										Back C	ontinue	

Figure 77. Select the Freelance project export folder

19. Engineering node IP: Scroll down the screen to enter the Engineering client node IP and the user credentials and click Add.

20. Harmony controllers Performance Input: If Harmony Controller category is selected in Step 8, click on Harmony tab to provide input for Harmony controllers data collection, Provide the below inputs to proceed with Harmony data collection. There are two panes in Harmony input page.

My Centrol Syste	m - Data Collector			<u>12</u>	۰	~
Configuration				SID35104-dhanraj	٢	
Required input fields Inputs Rectorin College	have been enabled. Provide your inputs on them and press Continue	*				
Harmony Inputs						
General 🕜		Topology Scan 🕜				
Control Network Type	PHENET O PHENE	Stan All Loops	2			
Logical ICI	4	Loops				
ICI Type	IETACT O VPNL/PM000	Topology File	Harmon/Topology.xml			
HAPI Licensed To	S+ Engineering	Data Collection				
HAPI Request(ms)	250	Data Collection Duration(min)	6			
IP Range Scan 🕝		Time Interval Between Samples(sec)	30			
Enter the Control Network IP's Start IP address	here	Samples	12			
End IP address	Aad .	Launch LCB Parsar				
Scanned IP Range		LCS Input data file	Browse			
		Include Edited Modules				
				Back	nlinue	

Figure 78. Harmony Rack

• General

a) Controller Type: INFI-NET and PN800 control network types are supported for 800xA with Harmony data collection.

b) Logical ICI: Provide the ICI number configured by Harmony System Configuration Utility (hSysCfgU.exe) for connecting into control network.

c) ICI Type: This selection will be done automatically based on Control Network Type selection.

d) HAPI Licensed To: Keep the default input S+ Engineering, unless it is different.

e) HAPI Request (ms): This interval, is the rate at which MCS-DC raise requests to the connected DCS System, in milliseconds and it is the minimum time interval between two consecutive requests to HAPI.

Default value is 250 milliseconds. Higher value will decrease the load on control network. Keep the default input.

• f) Traverse across IEB: If IEB bridge is present in the network, MCS-DC can traverse through it and collect data from PN800 network. In this case, user needs to enable the check box and provide the IPT bridge module IP address.



In order to traverse the IEB bridge, a minimum CAPI version of 5.1.0.12 must be used.

- IP Scan Range This input is applicable only if PN800 network type is selected. Provide the required Symphony DIN Controller IP range or IP of ENM module. Data collection will be done only modules which IP address falls within the specified scan range.
- Topology Scan

a) Scan All loops:

Check this Check Box to scan all loops

b) Loops: To Scan the specific loops, provide the loop numbers separated with comma (Example: 1, 5, 6)

- c) Topology File: Provide Name of Harmony topology scan file
- Data Collection

Data Collection Duration (min): It is recommended to keep the default input. Please note that the minimum data collection duration which can be set is 6 minutes.

Time Interval Between Samples (sec): It is recommended to keep the default input. Please note that the minimum time interval duration which can be set is 30 seconds.

Samples: Samples are auto calculated based on the formula Samples = Data Collection Duration*60 / Time Interval Between Samples. Please note that the minimum Samples which can be configured is 10. If a correct value is configured for Data Collection Duration (min) and Time Interval.

Near Samples field, a Green tick mark will appear. If wrong values are configured, a Red cross mark will appear.

- 21. Harmony controllers Performance Input, IP Scan Range: This input is applicable only if VPNI ICI Type is selected. Provide the required Symphony DIN Controller IP range or IP of ENM module. Data collection will be done only for the Controllers for which the IP address is entered here.
- 22. If a wrong IP range is added, there is an option to remove that. To remove incorrectly given IP range, select the IP range by clicking on it and then click on the **Remove** button.

23. Harmony INFI-NET network controller LCS Input data file: If the user already has a valid LCS input data file (.csv), click Browse button to select the file.

My Control Syste	m - Data Collector			-	ø	•
Configuration				SIDE1441 dhaaraj	٢	
Configure inputs and	click on "Continue" button					
Inputs						
farmony Periodic Collec	ction					
Remony Inputs						
General 🕜		Topology Scan 🕜				
Control Network Type	INFINET O PNEDD	Scan All Loops	8			
Lopical ICI	1	Loops				
ICI Type	ETICT O VPR (PM000)	Topology File	HarmonyTopologyxml			
HAPI Licensed To	8+ Engineering	Data Collection 🕜				
HAPI Request(ms)	250	Data Collection Duration(min)	60			
PRango Scan 🕢		Time Interval Between Samples(sec)	30			
Enter the Control Network IP's	here	O Dannalar	220			
Start IP address						
End IP address		LCSD84				
		Launch LCS Pariser				
Scanned IP Range						
		LCS input data file	Browse			
		Include Edited Modules				
				Back C	orense	ł.

Figure 79. Harmony Rack

- 24. INFI-NET network controllers LCS Input data file: For generating a new LCS Input data file, make sure that MCS-DC tool is launched in the S+ engineering node. Click on **Launch LCS Parser** button and follow the below procedure.
 - a. Click on **Open Project** button.



Figure 80. Open Project

→ 🕜 🛧 📙 > This PC	> Local Disk (C:) > SymphonyPl	us > projects > Abd		✓ Ö Search	Abdullah
rganize 🔻 New folder					
Abdullah ^ Na	me	Date modified	Туре	Size	
projects	Abdn.ebp	8/11/2020 2:11 PM	EBP File	0 KB	
SC-dontdelete					
🕿 OneDrive					
This PC					
📃 Desktop					
Documents					
🖶 Downloads					
👌 Music					
Pictures					
Videos					
🏪 Local Disk (C:)					
🛃 DVD Drive (D:) Sy					
🛫 spdc 2.0 (\\172.16					
A Makada 🗸 🗸					
File <u>n</u> ame:				~ Comp	oser Project (*.ebp)
					nen Cancel

b. Browse and select the required project (.ebp) file, click **Open**.

Figure 81. Open option

c. The following window appears with a progress bar as highlighted in Figure, which indicates that the data collection process is in progress. Once the data collection process is completed. Click on **Export as CSV** button to generate a new LCS Input data file and save the file in PC.

NOTE: The data collection process may take some time based on the size of the project.

About							
Open Project Export as C	SV						
farmonyRack	System	Text	Module Type	Loop	Node	Module	Bus Address
 Control Network1 	HarmonyRack	Control Network1	INNI5xx	1	2		
 Control Unit 1: 2 Controller2 EPC410: 21 	HarmonyRack	Control Network1	INNPMox	1	2	0	
Controller3 [BRC410: 31	HarmonyRack	Control Network1	BRC410	1	2	2	
Controller4 [MFP02: 4]	HarmonyRack	Control Network1	BRC410	1	2	3	
Controller5 [MFP02: 5]	HarmonyRack	Control Network1	MFP02	1	2	4	
Control Network2	HarmonyRack	Control Network1	MFP02	1	2	5	
Control Unit 1: 2 Control Unit 1: 2 Control Unit 1: 2	HarmonyRack	Control Network2	INNISxx	2	2		
Control Lipit 1: 3	HarmonyRack	Control Network2	INNPMox	2	2	0	
Controller2 [BRC400: 2]	HarmonyRack	Control Network2	8RC410	2	2	3	
Controller3 [BRC400: 3]	HarmonyRack	Control Network2	INNISxx	2	3		
	By CS Capacity Capacity Capacity Capacity Node Model Text Node Node Node Node Nodel Text Node Node Nodel Node Nodel Nodel Text Text Nodel Text Nodel Text Nodel Text Text Nodel Text Text Nodel Text Text Text Text Text Text Text Text Text						
	HarmonyBack	Control Network2	8RC400	2	3	3	
	Current Pr	oject: C\Symphon	/Plus\projects\Harmon	Rack\CH\HarmonyRa	ck\HarmonyRack.ebp		

Figure 82. Export as CSV

- d. A popup appears as a confirmation that the .csv file is exported successfully. Click **OK**.
- e. Click on the to **Browse** button to select the exported .csv file.

25. Click on **Continue** button to provide input for Melody Rack Controllers data collection; this tab appears only if Melody Rack data collection has been selected. Provide the below inputs to proceed with Melody Rack data collection (refer to Appendix D, System configuration export for exporting system configuration files).

	System - Bata Collector								
Configuration								SID35104-SarNWPrimaryDWN	0
Required inpu	t fields have been enabled. Provide	your inputs on them and	press Continue						
Inputs									
300xA HMI Period	ic Collection AC 70, 110, 1	160 Freelance	Melody Rack	MOD 300 Harmon	Precontrel P13	OCS	Prerequisites Check		
meloay inputs									
Melody Island Devices	Cribuild apdc2.2 input Re Melody 8	BusShamp.cn/	Browse						
CSE_Conf file	C-build apdc2.2 liput Rie Mekody (ISE_CONF	Browse						
Asset export folder	Brywse the file		Browse						
Engineering Server IP	172 · 16 ·	19 · 22							
UserName	611HVDOM\User2								
Password		æ							

Figure 83. Melody Rack Tab

- Melody Island Devices
 Click the **Browse** button to select the Melody Island DevicesExport file.
- CSE_Conf File
 Click the Browse button to select the Current CSE_Conf File.
- c. Asset Export Folder Click the **Browse** button to select the Asset Export Folder.
- d. Composer Melody node IP Address Enter the IP Address of S+ Engineering Server, where Composer Melody is installed.

- e. Username Provide the Composer Melody node user name.
- f. Password Provide the Composer Melody node server password
- 26. If MOD 300 Controller category is selected in Step 8, click on **MOD 300** tab to provide input for MOD 300 controllers data collection. Click the **Browse** button to select the latest ATF file, taken from AdvaBuild engineering node. Click **Continue** to proceed (refer to Appendix D, System configuration export for exporting system configuration files).

Configuration										SI035104-SarNWPrimary0WN	۲	
Re	iquired input fields have been	enabled. Provide your in	puts on them and p	ress Conânue								
Inputs												
DDxA HMI	Periodic Collection	AC 70, 110, 169	Freelance	Melody Rack	MOD 300	Harmony	Procentrol P13	ocs	Prerequisites Check			
IOD 300 Ing	outs 🙆											
Select the	Latest ATF file from the Adv	vant Build engineering b	sol									
C'Euddiapdi	c2.2%put File/M00300_ATFFile	MOD_DB_ALL_LATESTN	e Br	owse								

Figure 84. MOD300

27. If Procontrol P13 Controller category is selected in Step 8, click on **Procontrol P13** tab to provide input for Procontrol P13 controllers data collection. Click on **Browse** button to select the latest P13 source file (.CSV), taken from P13 engineering node.

ABB My	Control System - Data	Collector									- 0	>
Configuration										SID35104-SarNWPrimaryDWP	0	i
() Re	quired inputfields have been	enabled Provide your in	puts on them and	press Continue								
Inputs 800xA HMI	Periodic Collection	AC 70, 110, 160	Freelance	Melody Rack	MOD 300	Harmony	Procentrol P13	OCS	Prerequisites Check			
Procentrol Inp	outs 👩						-					
Export P13 control	ler handware configuration da	ata as a CSV file with fiel	d separator as corr	ima () and text separ:	ifor as double qu	ote (''). Give that C	SV file as input here.					
P13 Source File	Cribuldhopdc2.2	Input File VP13-AGY1VHIII C	sy 📕	Browse								
				54								
		1		Cox								
										Back	Continue	

Figure 85. P13 Source File

28. Click **Parse** button. Contents of the P13 source file (.CSV) is displayed.



Figure 86. Parse Button

a. For all the blank entries, select the exact module type and version from the drop down box and click **OK**, if there are any blank entries while clicking OK, an error is thrown saying "The below devices are not having the mapping name". Select the exact module type and version to proceed further.

Configuration									SID35104-SarNWPrimaryDWN	٢
	quired input fields have been	n enabled. Provide your in	puts on them and	press Optimue						
Inneste										
inputs										
1MH Ax008	Periodic Collection	AC 70, 110, 160	Freelance	Melody Rack	MOD 300 H	larmony Procontrol I	13 QCS Prerequisites Ch	eck		
				D.D. 040.0	-					
rocontrol in	outs 🔞		~	Pio Parse	10) 				^	
				Cabinat/Dack	Position	Device Name	Manned Product Short Name		-	
and DAT states	las handunas matinumlino d	als as a COURT with the		Cabinetrack	r Ganon	(from Eng. Tool)	imapped Product char Hume			
oponce na compo	net naturnale configuration o	ala as a covine munie	a separata	01CRC14FE	01	BV05A/R1		-		
12 6	-			01CRC14FE	02	BV00AVR1	2050010 5:00	-		
15 Source Pil	0.0000000002	State Official States		01CRC14FE	03	EBU1B/RZ	TUEBUTB-E/K2	<u> </u>		
				01CRC14FE	04	EB02C/R4	7040000 540	<u>.</u>		
		-		OTCRU14FE	05	ADUZD/RZ	70A0020-E/V2			
		Pa	10	01CRC14FE	00	A0020/01	7044038 E/04			
				01CRC14FE	44	EA00A/D4	TOPOROZD-LIKT			
				01CDC14FE	12	EA00A/01				
				01CRC14FE	15	EA02A/D1				
				01CRC14FE	17	00054/01	7000054 E/01			
				01CRC14FE	21	BK06A/D1	70BK06A E/P1	•1		
				01CRC14FE	03	E8018/82	70EB018-E/R2	-		
				01CRC14FE	05	AB02B/R2	70AB02B_E//2	-		
				01CRC14EE	07	AA028/R1	70AA028-F/R1	•		
				01CRC14FE	09	AA02B/R1	70AA02B_E/R1	-		
				01CRC14FF	11	EA018/R1		•		
				01CRC14FF	13	EA01B/R1		-		
				01CRC14FF	15	EA02A/R1		•		
				01CRC14FF	17	PR05A/R1	70PR05A-E/R1	-		
				01CRC14FF	21	BK06A/R1	70BK06A-E/R1	•		
				01CRC14FG	03	AA028/R1	70AA02B-E/R1	-		
				01CRC14FG	05	AA028/R1	70AA02B-E/R1	-		
					1.2				-	
								-		
								UK	Gances	

Figure 87. Mapped Product Short Name

b. If any modification is required, click **Edit**, to modify the parsed file. Click **Continue** to proceed. 29. If QCS Controller category is selected in Step 8, click on the Browse button to select the QCS folder where the latest joconfig.xml files are stored. The joconfig.xml files will be available in the projects directory of the QCS Connectivity Server, which is usually "C:\Program Files (x86)\ABB Industrial IT\Quality Control Solutions\Engineer IT\JOCONFIG \Projects". There will be sub-directories for the different builds that have been created on that QCS system. Select the directory with the most recent build that has been deployed to build the system. Once the folder is selected, all the available joconfig.xml files will be listed under Available section. The files can be moved from the Selected section to the Available section and vice versa. Move the required files to the Selected section. Click Continue to proceed..

Configuration A	Collection					CI036404 44	
comparation _	CONFLICT					51033104-eete	6
Inputs							
00xA HMI QCS	ESXi Periodic Collecti	on Prerequisites Che	ck				
CS Inputs							
QCS Version							
5.0.1			~				
							_
File Browser							ſ
File Browser C1Builds\input File/QCS						Browse	
File Browser C-Builds'input File/QCS Available				Selected		Browse	
File Browser C-Buildstinput File/QCS Available File Name	File Path	Date & Time		Selected File Name	File Path	Browse Date & Time	
File Browser C \Buildstinput File/DCS Available File Name joconfig-P1 xml	File Path C18uidstinput File/QCSijo	Date & Time 7/3/2021 11:12:06 PM	X	Selected File Name jocontig.xml	File Path C3Buldevingut F1eV2CStjo	Browse Date & Time 7/3/2021 11:12:06 PM	
File Browser C Wuldstinput File/QCS Available File Name joconfig-P1 xml joconfig-P2 xml	File Path C:Buildstinput File/QCSijo C:Buildstinput File/QCSijo	Date & Time 7/3/2021 11:12:06 PM 7/3/2021 11:12:06 PM	2	Selected File Name Jocontig smi	File Path C'tBulldyInput File/DCStys	Date & Time 7/2/2021 11:12:06 PM	
File Browser C VBuilds'input FIM/QCS Available File Name joconfig-P1 xml joconfig-P2 xml	File Path C:Buildstinpul File/QCSyo C:Buildstinpul File/QCSyo	Date & Time 7/J/2021 11:12:06 PM 7/J/2021 11:12:06 PM	2	Selected File Name Jocontly smi	File Path C'Buildstreoit FleiOCSyp.	Date & Time 7/2/20211112/26 PM	
File Browser CVBuildsYnput FileVOCS Available File Name joconfig-P2 xml	File Path C 'Buildstinput File/QCStpc C 'Buildstinput File/QCStpc	Date & Time 7/J/2021 11:12:06 PM 7/J/2021 11:12:06 PM	> »	Selected File Name Joccentig xml	File Path C Velul sympol File CCStp.	Date & Time 7/2/20211112/06 PM	
File Browser C-BuildsYnput File/ACCS Available File Name joconlip-P1.xml joconlip-P2.xml	File Path C:Surid'shiput File/QCSip C:Build'shiput File/QCSip	Date & Time 70/2021 11:12:06 PM 70/2021 11:12:06 PM	> «	Selected File Name pconfigured	File Path C (Guiderrout Fler/JCSyp -	Date & Time 7/2/2021 11:12:06 PM	
File Browser CHBuidstinput File/ACS Available File Name joconfig-P1.xml joconfig-P2.xml	File Path C 'Buildhingul File/QCSyo C 'Buildhingul File/QCSyo	Date & Time 702/021 11:12:00 PM 702/021 11:12:00 PM	*	Selected File Name poortig and	Fair Path Cristal Strangert FlerioCStp.	Date & Time 70/2021 11 12:00 PM	
File Browser CVBuildstingut File/ACS Available File Name joconfig-P1.xml joconfig-P2.xml	File Path C / Burlishiput File/CC Sys. C / Burlishiput File/CC Sys.	Date & Time 7/2/2021 1112 06 PM 7/2/2021 1112 06 PM	× « «	Selected File Name poconfig and	File Path C Studioneur Frend CSyn	Date & Time 7/20/2011112/200 PM	

Figure 88. Select QCS version

30. Click the **Browse** button to select the and load the joconfig.xml of the correct build from the joconfig project directory. The latest joconfig.xml file will be available in the projects directory of the QCS Connectivity Server, which is usually "C:\Program Files (x86)\ABB Industrial IT\Quality Control Solutions\Engineer IT\JOCONFIG\Projects". There will the sub directories for the different builds that have been created on that QCS system. Select the directory with the most current build that has been deployed to build the system and browse to the joconfig.xml file in there. Click **Continue** to proceed.

31. Once all HMI and connect inputs are provided, it is required to acknowledge that all the prerequisites for data collection are met. For this, click the tab Prerequisites and confirm each prerequisites by checking the check box against them. Please note that this is only an acknowledgment that user has verified all the prerequisites for proceeding with data collection. For more details, refer Section 2, Prerequisites.

ingut fields have been enabled field: Collection AC 7 fibbining prerequities after co distant and the second at the second distant and the second at the second at the fibrigation of the second at the second at the second at the second at the second at the second at the fibrigation of the second at the second	d. Provide your inputs on them and ju 70, 110, 160 Free lance compring. Refer prerequisites sect Pressuder ask. 1 to above a workford on at robote to a for more and the above oney	Molody Rack	MOD 300 Harm al for detailed procedure	ony Precontrol	P13 OCS	Preropublies Check	SIDISIBI SaNNPrimargOWI	٢
input fields have been enabled fields Calification AC 2 Rithouting prenegatives after co in the flamework 20 Service Par Langement Intermetation (NM) matching preferences in the context of the matching preferences in the context of the matching preferences in the context of the matching preferences in the context of the context of the matching preferences in the context of the context of the matching preferences in the context of the context of the matching preferences in the context of the context of the context of the matching preferences in the context of the context of the context of the matching preferences in the context of the context of the context of the matching preferences in the context of the context of the context of the context of the matching preferences in the context of the context of the context of the context of the matching preferences in the context of the context of the context of the matching preferences in the context of the context of the context of the matching preferences in the context of the context of the context of the context of the matching preferences in the context of the contex	d. Prodek your inputs on them and y 78, 110, 160 Free stance omshring. Refer presequilities such Pressures ed. To advonce from an advonce fro next from advonce of to an etablishing success	Molody Rack	MOD 300 Harm al for detailed procedure	ony Precontrol	P13 OCS	Prerequisites Oneck		
tiodic Collection AC 1 Sollowing prerequisites after oc at. Net Namework 20 Service Pac langument Nameration Service management Nameration (NNN material printinged case redentation	70, 110, 160 Freelance	Molody Rack	MOD 380 Harm af for detailed procedure	Precontrel	P13 QCS	Prerequisites Check		
Itodic Collection AC1 Notoring prerequisities after co at. He Renework 20 Service Pact langement Natureatation 1997 Instruct pringed case redentation	70, 110, 168 Freelance	Molody Rack	MOD 300 Harm	ony Precontrel	P13 QCS	Prerequisites Check		
Sollowing prerequisities after ou at the filanewski 2.0 Service Para Graggement Instrumentation Service Management Instrumentation (MM) maturitor privilegid user evelented	complying. Refer prerequisities section Precountes ack. Tor above is installed on all nodes for ince from services if it is not alleved survey	on of MCSDC user manual which data have to be collect	al for detailed procedure					
oh. Net Riarrevioli 2.0 Service Par Ganagement Instrumentation'' service Management Instrumentation (WM) instrutor privileged user credentable anome an the exempt sole (MCS).	ack. 1 or above is installed on all nodes for roe from services if it is not already surving	which data have to be collect	tel		Confirmation			
Ranagement Instrumentation" servic Management Instrumentation (WMI enstrator privileged user credentation excesses on the context and a MCS	rice from services if it is not already surving				R			
Management Instrumentation (WM snatrator privileged user credentials science on the correct code (MCS)	AND he said down Process II successful the last and	g on all nodes.						
instrator privileged user credentials	 In which is investigation on the on the 	nodes.			A.			
a point on the current node (\$5"C -	as of all nodes are provided as input for this	a collection.						
the stand of the context tools (made	5 Data Collector launch node).				P			
and accept the terms and condition	tons described on the end user loanse ag	psenent (EULA) of this produ-	act. (EULA can be opened fic	on information window).	V	-		
vated to selected controller(s) are m	rst.				×			
ire to revert the prerequisite	9 changes back to original state-Va	wes, after the collection	n process is complete.					
ire to rev	ert the proroquisit	ert the precessible changes back to original states o	ert the proceptible changes back to original state-values, after the collectio	ert the principalitie changes back to iniginal state-values, wher the callection process is complete.	ert the prorequisite changes lack to ariginal statistication, wher the collection process is complete.	ert the prorequisite changes lack to ariginal statistication, wher the collection process is complete.	et the prorequisite changes back to original statu-values, after the collection process is complete.	et the principalitie changes back to infijinal state values, after the callection process is complete.

Figure 89. Prerequisites Check

- 32. Click on the **Continue** button to proceed to collection screen.
- 33. Collection screen appears. Collection screen contains three parts. The top part contains command buttons for various actions by the user, progress bar and status message area. The middle part contains table for listing the list of HMI nodes and controllers that are part of data collection process and their respective status related to Scan, Agent Deployment and Data collection operations. The bottom section contains the log messages.

34. When the collection screen first appears, only Scan button is enabled. Click on the **Scan** button to scan the available/reachable nodes for data collection.

ABB My Control System - Data	Collector				-	o ×
Configuration Collection					SID12345-Test	© i
Elapsed Time: 00:00:00 Press 'Scar' button to start scanning for node Progress:	Scan Deploy	Agents Start Collection		Customize Cancel		
Devices						
Devices	Device Type	Scan Status	Agent Deployment Status	Collection Status		Remarks
<u> </u>						1
Log						D.
Time			 Logs 			

Figure 90. Scan the Nodes

35. Progress bar shows the progress of scanning.

My Control System - Data	Collector					~	2
Configuration Collection					SID12345-Test	٥	1
Elapsed Time: 00:00:00 Press "Scan" button to start scanning for nod	Scan Deploy	Agents Start Collection		Customize Cancel			
rogress:							
Devices							
Devices	Device Type	Scan Status	Agent Deployment Status	Collection Status		Ren	lark
1					1		
Time			- Logs				1

Figure 91. Scan Progress

36. Computers and controllers that are accessible from the MCS-DC launch node, are listed on the first column of the table shown in this page. Their types are listed on the second column. Scan status are shown on the third column. If the node is accessible the status is "Success" in Green. If the node is not accessible the status is "Failed" in Red. However if the accessibility status can't be checked at this point (for example AC 800M controller), then the status is "Not applicable" in Grey.

My Control System	n - Data Collector					• •
Configuration Colle	ction				SID12345-Test	٥
Bapsed Time: 00:01:09	Scan Deploy	Agents Start Collection		Customize Car	rcel	
lick on 'Deploy Agents' button to sta	art deploying the agent or click on 'Customization'	button to customize the selection	_			
Progress:						
Devices						
Devices	Device Type	Scan Status	Agent Deployment Status	Collection Status		Remark
Controller_2ü	Controller	Not Applicable	Not Started	Not Started	IPs: 172.16.80.51	
6101ASCS1	Computer	Success	Not Started	Not Staned	172.16.20.70	
5101ASCS2	Computer	Success	Not Started	Not Started	172.16.20.72	
SXDC2	Computer	Success	Not Started	Not Started	172.16.20.12	
5XDC1	Computer	Success	Not Started	Not Started	172.16.20.11	
d.						
og						
lime			Logs			
2020-06-10 00:18:17			Scanning for Node reachability is completed			
2020-06-10 00:18:17			Completed deployment for all the nodes			

Figure 92. Data Collection Progress

37. The possible reasons for the failed scans are indicated under the Remarks column. Furthermore, a message appears on the user interface prompting the user to either rescan (partially or fully) or proceed with agent deployment. Users may fix the issue and re-scan the failed nodes by clicking the **Scan** button again. Remarks column also indicates the IP address used for accessing the nodes.

38. Once node scan is completed, Deploy Agents and Customize buttons will be enabled. User can customize the collection by choosing only few HMI/controller nodes from the list of accessible nodes, using customize option. Clicking on the **Customize** button opens customization window.

My Control Syster	n - Data Collector				2	a x
Configuration O Colle	ection				SID12345-Test	© i
Elapsed Time: 00:01:34	Scan	Appends Start Collection		Customize Car	scel	
Click on 'Deploy Agents' button to sta	art deploying the agent or click on 'Customization'	button to customize the selection				
						_
Progress:						
Devices						
						10-11
Devices	Device Type	Scan Status Not Applicable	Agent Deployment Status	Collection Status	Be 173 16 20 21	Remarks
610145051	Computer	Success	Not Started	Not Started	172 16 20 70	
810145052	Company	Success	Not Started	Not Starled	172 16 20 72	
6XDC2	Completer	Success	Not Started	Not Started	172 16 20 12	
6XDC1	Computer	Success	Not Started	Not Starled	172 16 20 11	
inden.						
Log						b
Time		•	Logs			•
2020-06-10 00:10:25			Scanning for Node reachability is completed			
2020-06-10 00:10:25			Completed deployment for all the nodes			
2020-06-10 00:10:25			Completed Deployment Check for Node 172.1	6.20.11		

Figure 93. Select Required Nodes

39. User has an option to customize the Data collection nodes for Performance, Lifecycle, Security and Software data collection. To customize click on the **Customize** button. All accessible HMI and controller nodes are shown in the list. By default, all accessible HMI and controller nodes will be selected. User can de-select the nodes that are not desired to be collected by un-checking the respective check boxes against the node names. Click on **OK** button to save the customization configuration and close the customize window. Click on **Reset** button will reset the customization configuration. Please note, that controller customization is not available for this release.

ABB My Control System - Data Collector				
🚯 Configuration 🚳 Collection		\$0123/5.Text	۲	i
Node Selection Date Categories Selection				
🖅 🖉 Computers	🔹 🖉 💭 🐨 Caribolius			
🖭 🖤 matvasan	🖂 🖷 Cometri_Eu(1210.00.01)			
P B REPARTY				
PI = 600				
la la				-)

Figure 94. Deploy Agents

40. Data category selection is possible for Performance data collection and partially for Lifecycle data collection. All the data categories are selected by default. User shall de-select the data categories that are not desired to be collected by un-checking the respective check boxes against the data category names. Click on **OK** button to save the customization configuration and close the customize window. Click on **Reset** button to reset the customization configuration configuration configuration configuration configuration. Data categories customization is applicable only for HMI nodes, it is not applicable for controllers.

Configuration O Collection		SID12345 Test
orman FreeDomann Manuates		
Node Selection Data Categories Selection		
🗹 🐺 Data Categories	1	
👻 🖤 Gastern Applications		
M 🐺 TirreSynchronizationCheck		
🗹 🐺 PlaybackAlignment		
😪 🛡 RegionalDataInformation		
🗹 💭 LicensefleCheck		
M SPOUserFrivlages		
🔛 🗰 SPOUsers		
🗹 💭 NumberOffagsBult		
😔 🛡 Gueuestankontaring		
🔀 🛡 ProcessintoCollector		
🗹 📱 APHENistConnectionMonitoring		
😪 🖷 Splus Registry Settings		
🗹 🛡 SplusConfiguration		
😢 🛡 DomainControllerChagnontics		
🛃 🛡 DomainEventLogo		
😥 🛡 SplusHestonar/Status		
🕑 🛡 Splucklußtmasteolikgriment		
😢 🛡 @PlusLogFiles		
🔻 🗹 💭 Nebvalk		
🖂 🖷 Natwohikdsectarintormation		
🔄 🛡 UserGroupshylormation	-	

Figure 95. Data Categories Selection

41. Click on the **Deploy Agents** button to deploy data collection agents on all the HMI nodes listed. MCS-DC performs data collection of HMI nodes through these data collection agents.

ADD My Control System	- Data Collector					• •
Configuration Colle	ction				SID12345-Test	٢
Elapsed Time: 00:01:34	Scan Deploy	Agents Start Collection		Customize Car	ncel	
Click on 'Deploy Agents' button to sta	rt deploying the agent or click on 'Customization'	button to customize the selection				
						-
rogress:						-
Devices						
Devices	Device Type	Scan Status	Agent Deployment Status	Collection Status		Remark
Controller_20	Controller	Not Applicable	Not Started	Not Started	IPs: 172.16.80.51	restour k
6101ASCS1	Computer	Success	Not Started	Not Started	172.16.20.70	
6101ASC52	Computer	Success	Not Started	Not Started	172.16.20.72	
6XDC2	Computer	Success	Not Started	Not Started	172.16.20.12	
6XDC1	Computer	Success	Not Started	Not Starfed	172.16.20.11	
•						2
_og						E
Tame			Logs			
2020-06-10 00:10:25			Scanning for Node reachability is completed			1
2020-06-10 00:10:25			Completed deployment for all the nodes			
2020 05 10 02 10 25			Completed Deplement Chart for Nade 172.1	16 20 11		

Figure 96. Deployment Status

42. Once the data collection agents are successfully deployed on the HMI nodes, Success status is shown under Agent Deployment Status column. If agent deployment fails for any node, same is indicated (similar to Scan status). At this point, Start Collection button will get enabled. Click on the **Start Collection** button to start the data collection.

						1.175
Configuration Colle	ction				SID12345-Test	٥
Elapsed Time: 00:01:45	Scan Deploy	Apents Start Collection		Customize Ca	ncel	
Click on 'Start Collection' button to sta	art collecting the data					
						_
Progress:						
Devices						
Devileure	Davides Tuna	Free Fisher	Annual Development Plates	Collection Risks		Demarks
Controller 20	Controller	Not Applicable	Not Started	Not Started	IPs: 172.16.80.51	Piendiks
6101ASCS1	Computer	Success	Success	Not Started	172.16.20.70	
6101ASCS2	Computer	Success	Success	Not Started	172.16.20.72	
6XDC2	Computer	Success	Success	Not Started	172.16.20.12	
6XDC1	Computer	Success	Success	Not Started	172.16.20.11	
•1						<u>)</u>
Log						E
Time			• Logs			
2020-06-03 03 51 36			Deployment of collection agents is completed			-
2020-06-03 03 51 36			Copy Type SimpleCopy			
2020-06-03 03 51:35			Simple File Copy Operation			

Figure 97. Collection Progress

43. Data collection progress can be seen on the progress bar and on the Collection Status column.

ABB My Control Syst	em - Data Collector					
Configuration 0 Cole	clea				580(2345-Ter	e 0
Elepsed Tane: 00:01:45	Scan Depity	Agents Start Delection		Cutomas Ca	hal	
Cito, on "Start Collection" betton to its	art collecting the data					
Printess:						
Devices						
Devices	Device Type	Scatt Metha	Agent Deployment States	Collectors Status		Retorks
Controller, 20	Complex	NotApplicatie	Vet Started	Not Started	Ph: 172 16 80.51	
6101ASCS1	Computer	54040	Succese	Not Started	172.16.20.70	
6101ASC32	Computer	Setters	Success	Not Started	172 18 20 72	
6/002	Computer	Success	Success	Not Started	172 16 20 12	
64001	Computer	Second	Duconar	Not Starfind	172.18.20.11	
4						
Log						8
Time		1.1	Loss			
2020-06-00 02 51 26			Deployment of colection agents is completed			4
2020-08-03 02 51 36			Copy Type SimpleCopy			
2029-08-09 82 51 35			Simple File Copy Operation			

Figure 98. Collection File

44. Once the data collection is completed, Result screen appears. Result screen contains three parts, the top part contains the command buttons for various user actions, the middle part contains the hardware tree information and the bottom part contains the collection statistics.

ABB My Control Sy	stem - Data Collec	tor					-	a	×
🖨 Configuration 👩 Collect	ion 🚷 Result						SID35104-sar	٥	i
Below is output path				Start New Collection		Bot	0		
File Path : C::Builds:SPDC-2.2(SPD)	2.2.2.2.02108.26002/Master	Install'Output \$8035104_2021	10831 2245 800xA L ParLaip				and the second		
Hardware Tree									
• 💭 800xA,800xA					Property Name		Property Value		
• 💭 Computers									
611PACS									
Controllers									
Devices									
				-					
				-					
				•					•
Result Summary									
Detected nodes during node scan :	5		Collection Start Time	31.08.2021 22:45:11					
Selected nodes by the User :	1		Collection End Time :	31.08.2021 22:47:45					
Successfully collected nodes :	1								
Nodes with collection failures :	1								

Figure 99. Collection File Path

- 45. Collection file will be created automatically once the collection is completed. Once the collection file is created, its file path appears on the screen. The collection file can be viewed by clicking on the file path.
- 46. Click on the **New collection** button to get back the Configuration screen and start a new collection. Clicking on the **Exit** button to close the MCS-DC application.

My Control System - Data Collector				
Configuration		SID35184-Eete	۲	i
Configure inputs and click on *Continue* button				
Inputs				
800xA HMI ESXi Periodic Collection Prerequisites Check				
C Enable parallel collection of client nodes				
IP Range Scan 💡	New User Credentials (?)			
Enter only the IPs related to network devices and computers that are not part of system configuration. Do not include HMI and Controller nodes.	User Name (In the format domain name/username for domain system)			
Start IP address				
End IP address	Password			
Add	Add			
Scanned IP Range	User Credentials for Full Access			
	xaopm\800xainstaller : ************			
Remove	Remove			
		Back Cor	itinue	

Figure 100. Parallel data collection from client nodes
3.4.2 Advanced Mode Data Collection Process for Freelance HMI

- 1. Deploy MCS-DC in the hard drive (Operating System partition) of the node from which data collection must be executed. MCS-DC can be launched from any Freelance node.
- 2. Double-click on the MCS-DC_Launcher.exe, to launch the tool. It is present inside the unzipped MCS-DC folder. The initial screen appears as shown in Figure 101. MCS-DC tool runs the below checks on the launch node. If the check is passed, a Green tick mark is shown, click the Launch button to proceed for data collection. If the check fails, a Red cross mark is shown, user has to fix the issue and launch the MCS-DC tool again.

	System ID OPlease re-enter the password	?
0	SID1234	
	Collected By	
0	test	
	Provide password for encryption (Enter between 8-16 character)	
0	*****	۲
	Re-enter password	
	*****	۲
	Basic Mode Advanced Mode	
1 00	n the basic mode, MCS-DC will detect the system automatically. Basic mode is not supported for i+ operations. 800xA and Freelance are supported. But 800xA with Harmony or Procontrol P13 ontrollers are not supported Lise advanced mode for these systems. Press the scan button to.	

Figure 101. MCS-DC Launcher

.NET Framework version check

If the .NET Framework version is 1.1 or above, then this check is passed and MCS-DC 2.X version can be launched for data collection.

If the .NET Framework version is lower than 1.1, then this check is failed and MCS-DC 2.X version cannot be launched for data collection, instead MCS-DC 1.9.x version will be launched for data collection. Please refer MCS-DC 1.9.x user manual for data collection procedure.

• Prerequisites check

Below prerequisites are validated. User can proceed for data collection only if these checks are passed.

a) User Privileges Check, checks if the MCS-DC Tool is launched in the user account with administrator privileges.

b) System drive launch check, MCS-DC tool should be launched only from the local disk drive of the launch node.

c) Required Disk Space Check, Free disk space of 500MB should be available on the disk drive from which the MCS-DC is launched.

3. Provide the System ID of the Freelance system and your full name and provide password for encryption. This password will be used for encrypting collected data and create system data file. Decryption of the collected data is possible only at 3 places, namely, My Control System web, My Control System On-premise and My Control System Portable. To use the system data file at My Control System Portable, the user needs to enter the same password, which is entered here, to decrypt the data. So, remember this password. Once all the required inputs are provided, select Advanced Mode. Upon clicking on the OK button, validation of System ID and Collected by fields are executed. Tick mark appears if validation succeeds and cross marks appear when validation fails against respective fields. Correct the errors and click on the OK button to proceed further.

	System ID	?
0	SID1234	
	Collected By	
0	test	
0	Provide password for encryption (Enter between 8-16 character)	
Ø	*******	
	Basic Mode Advanced Mode	
	n the advanced mode, MCS-DC will not detect the system automatically. User must select the HMI and controller systems manually. User will be able to customize the data collection. All systems that are supported by MCS-DC, are supported in the advanced mode. Click on the OK	

Figure 102. Login

- 4. Configuration screen appears. User needs to select applicable HMI/controllers and data category (like Performance, Life cycle, etc.) on this screen. Supported HMIs are listed on the left half of the screen. When a HMI selection changes, the related applicable controllers appear on the right half of the screen. Default selection of HMI is 800xA. To change the selection, click on the name of the HMI. Selected HMI is highlighted in Blue.
- 5. Supported controllers for Freelance HMI:
 - Freelance
- 6. Supported data categories for Freelance HMI:
 - Performance
 - Life cycle
 - Security
- 7. Supported data categories for Freelance Controller:
 - Performance
 - Life cycle
- 8. Select the required data categories and then press **Continue** to proceed. A typical selection is shown below:



Figure 103. HMI

- 9. Input configuration screen appears. The type of required inputs may vary based on the HMI, controller and data categories, selected on the previous step.
- 10. Refer below the required inputs for each system.



For the procedure on how to export system configuration files refer to Appendix D, System configuration export.

Freelance HMI:

- IP range (to scan and detect non-Freelance nodes, optional)
- Admin user credentials to access all computer nodes. If the customer project file type is .csvs, user has to provide the customer project decryption key
- File location of customer project (.csv/.csvs file)

Freelance controller:

 File location of customer project (.csv/.csvs file). If the customer project file type is .csvs, user has to provide the customer project decryption key 11. Click the **Browse** button to select the Freelance project export folder. Once the project export folder is selected, all the available project export (.csv/.csvs) files are listed under Available section. The most recent export (.csv/.csvs) file is auto selected and is listed under Selected section. There are options to move the export files from Selected section to Available section and vice versa. Move the required export files to Selected section. If the selected project export file type is .csvs, project export file decryption key has to be provided in the decryption key field (refer to Appendix D, System configuration export for exporting system configuration files).

Service Products Data	Collector								-	0
Configuration								SID75490-dhanra	ij (0
Input Freelance Prerequisites Check	k									
SPDC detected th	e latest Freelance project e	oport file fi2018.cov. This is set	iected for data o	collection. If this is not the int	ended selection, please selec	the appropriate fife(s)				
Export your freelance project as CS Source File File Browser	5V file, and browse this file	in below window					7			
C IProgramDataWBB/Freeland	celesport			Selected		Browse	4			
File Name	File Path	Date & Time		File Name	Decryption Key	Date & Time				
			>	fl2016.csv	N/A	3/31/2021 3:48:15 AM				
			\gg							
			«							
			<							
								Back	Continu	ue

Figure 104. Project Folder

12. IP Range: Freelance nodes that are part of the .csv/.csvs file from the project are detected automatically by the Data Collector, so these must not be entered. However, if there are any computers that are connected to the Freelance system that you want to be part of data collection, this is where their IP addresses must be entered, so this is an optional input. If nothing is entered, Data Collector will collect only Freelance nodes.

13. Enter the IP range and select the Add button; it is possible to enter multiple IP ranges, if needed. The greater the range, the more time it will take to complete the node scan, so be careful here and enter only the ranges that are strictly necessary.

My Control System - Data Collector		- 0
Input Input Freedance Prerequisitors Check		S1075496 elbannaj 🔘
P Rarge Scan Enter outputs half have been and compared to the state and and of system conditionations. Die notificationale HAR and Scampible notes.	New Discr Credentials Uper Flame	
StartP-address 172 16 4 12 End P-address 172 16 4 12	Favorat	
Scarrol 9 Paryo	User Constantials for Public const	
- Kentove	Herrity-P	Back Continue

Figure 105. HMI Nodes

- 14. If an incorrect range is added, it can be removed: just select it and then select the **Remove** button.
- 15. Next input is user Credentials. Provide user name and password of administrative user to access all the HMI nodes for data collection. Click on the **Add** button. Please note, for nodes in domain network, username should be provided in the format of "PC Name\User". User Credentials must have administrator privileges in order to be able to access to all the nodes part of the Freelance system.
- 16. If incorrect credentials are added, they can be removed: just select these and then select the **Remove** button.
- 17. The last step it to acknowledge that all the prerequisites for data collection have been verified and are as expected. To do this, select the Prerequisites tab and confirm each of these individually. Please note that this is just a manual acknowledgment that all the prerequisites as listed in Section 2, Prerequisites of this User Manual have been met. If the up to the user to have implemented these in all the computers part of data collection. For this, click the tab Prerequisites and confirm each prerequisites by checking the check box against them. Please note, this is only an acknowledgment that user has verified all the prerequisites for proceeding with data collection. For more details, refer Section 2, Prerequisites.

		141
geration O Collection		SID75490-Ver81SP1
pat		
fance Prerequisites Check Periodic Collection		
on confirm that all these prerequisites are met. Refer to prerequisites section of the User Hanual for details.		
Perceiler	Continuation	
Very har Microsoft Na; I Fransvork 20 Service Pack 1 or above a viscosed on all nodes part of data collection. Then on File and Tester shares for all extends confiles on all nodes.		
Start "Server" privice fore pervices if it is not already surving on all nodes	9	
Start "Windows Management Instrumentation" services from services if it is not already naming on all nodes	P	
Coste "Localiccount skeel Belloky" eging key on al rodes	P	
Enable Windows Management Instrumentation (WMI) in Windows linewall exception list on all nodes	9	
Confen that administrator privleged user credentials for all nodes are provided as input for data collection	9	
Control Hud MCS (DC is launched tron a Freelance Engineering client node	P	
I read, understood and accept the tenss and conditions described on the end user licence agreement EULA) of this product. EULA can be opened from information window!	P	
Considerate of the statement of the state		
T, in order to meet one or more prerequisites, you had to make changes to your system, be reminded to bring these back to their original value	rting after data collection is complete	
MCS-0C is closed.		

Figure 106. Prerequisites

- 18. Click on the **Continue** button to proceed to collection screen.
- 19. Collection screen appears. Collection screen contains three parts. The top part contains command buttons for various actions by the user, progress bar and status message area. The middle part contains table for listing the list of HMI nodes and controllers that are part of data collection process and their respective status related to Scan, Agent deployment and Data collection operations. The bottom section contains the log messages.
- 20. When the collection screen first appears, only Scan button is enabled. Click on the **Scan** button to scan the available/reachable nodes for data collection.

ABB My Control System - D	ata Collector				÷	a x
Configuration Collection					SID12345-Test	© i
Elapsed Time: 00:00:00 Press 'Scan' button to start scanning for nod Progress:	Scan Deploy	Agents Start Collection		Customize Cancel		
Devices						
Devices	Device Type	Scan Status	Agent Deployment Status	Collection Status		Remarks
<u>.</u>		1				1
Log						63
Time			Logs			•

Figure 107. Scanning the Nodes

- 21. Progress bar shows the progress of scanning.
- 22. Computers and controllers that are accessible from the MCS-DC launch node, are listed on the first column of the table shown on this page. Their types are listed on the second column. Scan status are shown on the third column. If the node is accessible the status is "Success" in Green. If the node is not accessible the status is "Failed" in Red. However if the accessibility status can't be checked at this point, then the status is "Not applicable" in Grey.

23. The possible reasons for the failed scans are indicated under the Remarks column. Furthermore, a message appears on the user interface prompting the user to either rescan (partially or fully) or proceed with agent deployment. Users may fix the issue and re-scan the failed nodes by clicking the **Scan** button again. Remarks column also indicates the IP address used for accessing the nodes.

24. Once the scan completes, all the available nodes are listed. If the HMI nodes are accessible, it is shown as Success in Scan status field, if the nodes are not accessible, it is shown as Failed in Scan status field, this may be due to issues such as Network unreliable, IP not reachable, privileges issue over network, User rights not matching etc. If a node scan fails, a message appears on the user interface prompting the user to either rescan (partially or fully) or proceed with agent deployment. Users may fix the issue and repeat the scan, click the **Scan** button to repeat the scan.

My Control System	- Data Collector					
Configuration	ction				SID12345-Test	٥
Elapsed Time: 00:04:52 Node scan is completed. Fix issues or Progress:	Scan Deploy n failed nodes and re-scan. Or proceed with agent	Agents Start Collection deployment.		Customize Ca	ncel	
Devices						
Devices	Device Type	Scan Status	Agent Deployment Status	Collection Status		Remark
P\$1	Controller	Success	Not Applicable	Not Started	IPs: 172.16.4.8	
C700F2	Controller	Success	Not Applicable	Not Started	IPs: 172.16.4.12	
C800FR3	Controller	Success	Not Applicable	Not Started	IPs: 172.16.4.14, 172.16.5.15	
4C900F1	Controller	Success	Not Applicable	Not Started	IPs: 172.16.5.17	
AC900FP1	Controller	Success	Not Applicable	Not Started	IPs: 172.16.4.20	
4C900FRL7	Controller	Success	Not Applicable	Not Starled	IPs: 172.16.4.18, 172.16.5.19	
FL2019_ES	Computer	Success	Not Started	Not Started	127.0.0.1	
FL2019MIXED	Computer	Success	Not Started	Not Started	172.16.4.7 is not reachable	
603ASCS1	Computer	Success	Not Staned	Not Starled	172.16.4.40	ъ
.og						
Time			• Logs			
2020-06-08 18:16:58			Scan Completed			
2020-06-08 18:16:58			Completed deployment for all the nodes			
2020-06-08 18:16:58			Completed Deployment Check for Node: 172.1	16.4.6		

Figure 108. List of Nodes

25. User has an option to customize the Data collection nodes for Performance and Lifecycle data collection, to customize click on **Customize** button. All accessible HMI and controller nodes are listed. By default, all accessible HMI and controller nodes will be selected. User shall de-select the nodes that are not desired to be collected, by un-checking the respective check boxes against the node names. Clicking on **OK** button will save the customization configuration and close the customize window. Clicking on **Reset** button will reset the customization configuration. Please note, that controller customization is not available for this release.

My Control System - Data Collector		
Configuration		SIDI2315 Teet 🚳
Node Selector		
• 🖓 🛢 Computers	• 💹 🗮 Carbolon	
🗹 🛡 -Lattajob	רג און אין אין אין אין אין אין אין אין אין אי	
M 🖷 71.2119-00	🗹 🜉 X07K0/2 (VC200F 112.164.13)	
M 🖬 10 349C 81	🐼 💭 JOBHOTRI (POBOJER: 170.1 6.1.14)	
	🕑 👹 AC 9401Y1 (AC 800Y1 - YZ, 9.420)	
	AC9007EL7 (AC9007EL7 (AC9037EL: 175.164.18)	
		is in

Figure 109. Customize Option

26. Data category selection is possible for Performance data collection and partially for Lifecycle data collection. All the data categories are selected by default. User shall de-select the data categories that are not desired to be collected by un-checking the respective check boxes against the data category names. Clicking on the **OK** button will save the customization configuration and close the customize window. Clicking on the **Reset** button will reset the customization configuration is applicable only for HMI nodes, it is not applicable for controllers.

A B My Control System - Data Collector	SIDIZIISTeni O X		
Configuration Collection	SD1225-Test 🛛	i	
Configuration Configuration Holds Solectellen Data Categories Solection ▼ ♥ ♥ Computer Computer	SID12345.Test	0	1

Figure 110. Select the Nodes

27. Click on the **Deploy Agents** button to deploy data collection agents on all the HMI nodes listed. MCS-DC performs data collection of HMI nodes through these data collection agents.

My Control System	- Data Collector					
Configuration Colle	ction				SID12345-Tes	0
Elapsed Time: 00:04:52	Sean Dation	And Stat Collection	() () () () () () () () () ()	Cuttorella	stat	
linde scan is completed. Dr issues o	n failed notes and reactan. Or proceed with asset	detionment		Contract Contract		
toor scan it completes in a most o	a name index and rescard of proceed and again	organitatine.				
Progress:						
Devices						
Devices	Device Type	Scan Status	Agent Deployment Status	Collection Status		Remark
PS1	Controller	Success	Not Applicable	Not Starled	IPs: 172.16.4.8	
AC700F2	Controller	Success	Not Applicable	Not Started	IPs: 172.16.4.12	
AC800FR3	Controller	Success	Not Applicable	Not Started	IPs: 172.16.4.14, 172.16.5.15	
AC900F1	Controller	Success	Not Applicable	Not Started	IPs: 172.16.5.17	
AC900FP1	Controller	Success	Not Applicable	Not Started	IPs: 172.16.4.20	
4C900FRL7	Controller	Success	Not Applicable	Not Started	IPs: 172.16.4.18, 172.16.5.19	
FL2019_ES	Computer	Success	Not Staned	Not Starled	127.0.0.1	
FL2019MIXED	Computer	Success	Not Started	Not Started	172.16.4.7 is not reachable	
603ASCS1	Computer	Success	Not Started	Not Started	172.16.4.40	
.og						
Time			• Logs			
2020-06-08 18:16:58			Scan Completed			
2020-06-08 18 16 58			Completed deployment for all the nodes			
2020-06-08 18 16 58			Completed Deninyment Check for Node 172 1	6.4.6		

Figure 111. Deploy Agents

28. Once the data collection agents are successfully deployed on the HMI nodes, Success status is shown under Agent Deployment Status column. If agent deployment fails for any node, same is indicated (similar to Scan status). At this point, Start Collection button will be enabled. Click on the **Start Collection** button to start the data collection.

A ID ID My Control system	- Data Collector					<u> М</u> О
Configuration Colle	ction				SID12345-Test	۲
Elapsed Time: 00:06:59	Scan Denloy	Agents Start Collection		Customice Car	icel	
Click on 'Start Collection' button to st	art collecting the data		-			
						_
Progress:						
Devices						
Devices	Device Type	Scan Status	Agent Deployment Status	Collection Status	Dec 470 44 4 0	Remark
1070470	Combiner	Surrass	Net Anticable	Not Started	PS. 172.10.4.6	
AC700F2	Controller	Success	Net Andrahia	Net Started	IP3: 172.10.4.12	
AC800FR3	Controller		Not Applicable	Net Started	P1. 172.10.4.14, 172.10.3.15	
	Composer	Success	Not Anticable	Not Started	PS. 172.16.5.17	
ACSODEP1	Controller	Entran	Not Applicable	Not Started	IPS: 1/2.16.4.20	
ACSOCHER,7	Controller	Entering	Not Planted	Not Starting	IPS: 172.10.4.18, 172.10.5.19	
+C2019_ES	Computer	Decors:	Not Stated	No. Suines	127.0.0.1	
FL2019MIXED	Computer	Success	NOLSGRED	Notstaned	172.16.4.7 is not reachable	
803ASCS1	Computer	Success	Success	Not Staned	172.16.4.40	Ŀ
Log						-
Time			• Loos			
2020-06-08 18:24:05			Deploy Completed			-
2020-06-08 18:24:05			Copy Type SimpleCopy			

Figure 112. Agent Deployment Status

29. Data collection progress can be seen on the progress bar and on the Collection Status column.

ABB My Control System -	Data Collector					
@ Ladgester @ Calume						NUMBER OF
Impact Taxes (00.00.10	the balance in		Jackson	in terms		
(hit or 'hier Laterber' tallen is else' adur	ing the last					
Derive						
Destan	Second Space	tran Report	Agent Statement States .	Collector Resp.		fengle
ACMERT	Contractory (Contractory)	factors	Text Approximation	Succes	Win 1752 1965 17	
ACTORS	Contraction	Sec.mo.	The Spattering	a Paper	Fe 112 No. 12	
ACROPHE .	Debalar	(based)	the hypersector	and Stand	Ph F2 R414 (2181)	
P5+	Saladar	bacons.	Test Agencyclin	test travest	Ps 172 164.8	
ACREMENT.	Definition	(second	the spectrum	ind panel	#10 FT2 16 4 56, 172 16 5 18	
DEDRYCH ESHING	Conjugate	factors.	the second s	col Speci	Who first he was not stick pitch and	
PE NEL	Despile	(higher	becase	(of Select	Per 112 18 J 3, 188 254 182 193	
1						
ing .						
Test .			- top			
2018-11-08-1027-01			Depicy Completed			
20140-11-00-12-01			Gen fair Small Car			

Figure 113. Data Collection Progress

30. Once the data collection is completed, result screen appears. Result screen contains three parts. The top part contains the command buttons for various user actions. The middle part the hardware tree information. The bottom part contains the collection statistics.



Figure 114. Collection File Path

- 31. Collection file will be created automatically once the collection is completed. Once the collection file is created, its file path appears on the screen. The collection file can be viewed by clicking on the file path.
- 32. Click on the **Start New collection** button to get back the Configuration screen and start with a new collection. Click on the **Exit** button to close the MCS-DC application.

3.4.3 Advanced mode data collection for S+ Operations with Harmony Controllers

1. Deploy MCS-DC in the hard drive (Operating System partition) of the node from which data collection must be executed.

Depending on the HMI/Controller, MCS-DC launch nodes may vary. For S+ Operations HMI data collection, the MCS-DC tool can be launched on any S+ Operations node, or on any engineering/client nodes which is connected in the same network as S+ Operations nodes.

• For S+ Operations HMI with Harmony Controllers, following nodes shall be used for data collection.

a) Performance and Lifecycle data: S+ Control Engineering node (Composer Harmony is present)

b) Performance data only: Recommended on S+ Control Engineering node or any node from where control network is reachable.

2. Double-click on the **MCS-DC_Launcher.exe**, to launch the tool. The initial screen appears as shown below. MCS-DC tool runs some preliminary checks on the launch node. If the checks are passed, a Green tick mark is shown, click the Launch button to proceed for data collection. If the checks fails, a Red Cross mark is shown. What is missing, or exists but in an incorrect version, must be installed before launching the tool again. If there is not enough disk space, remove some old or temporary files in order to make space.

ABB	My Control System - Data Collector	×
1.00		
	MCS-DC	
	0	
	.Net version check	
	User privilege check	
	Disk space check 📀	
	MCS-DC launch drive check	
	New collection Merging of data files	
	and a second sec	
	Launch →	
$\gamma = \pi - \pi$		

Figure 115. MCS-DC Launcher

• .NET Framework version check.

If the .NET Framework version is 1.1 or above, then this check is passed and MCS-DC can be launched for data collection.

If the .NET Framework version is lower than 1.1 the check fails, as MCS-DC can't be launched.

Prerequisites check.

Below prerequisites are validated. User can proceed for data collection only if these checks are passed.

a) User Privileges Check, checks if the MCS-DC Tool is launched in the user account with administrator privileges.

b) System drive launch check, MCS-DC tool must be launched from the local disk drive of the launch node.

c) Required Disk Space Check, Free disk space of 500MB must be available on the disk drive from which the MCS-DC is launched.

3. Provide the System ID of the S+ Operations HMI and your full name and provide password for encryption. This password will be used for encrypting collected data and create system data file. Decryption of the collected data is possible only at 3 places, namely, My Control System web, My Control System On-premise and My Control System Portable. To use the system data file at My Control System Portable, the user needs to enter the same password, which is entered here, to decrypt the data. So, remember this password. Once all the required inputs are provided, select Advanced Mode. Upon clicking on the OK button, validation of System ID and Collected by fields is executed. Tick mark appears if validation succeeds and cross marks appear when validation fails against respective fields. Correct the errors and click on the OK button to proceed further.

	Svetom ID	2
0	SID1234	
	Collected By	
0	test	
0	Provide password for encryption (Enter between 8-1	6 character)
0	Re-enter password	
Č	O Basic Mode Adv	vanced Mode

Figure 116. System credentials For Advanced Mode

4. Configuration screen appears. Click S+ Operations On the left pane and select the check box for the required data category (Performance, Life Cycle, Security). If Security is selected, data collection for each node will take some extra time. Security data can be collected only for S+ Operations version 2.1 or higher. Similarly, Select Harmony on the right pane and select the check box for the required data category (Performance, Life Cycle). Click Continue. Figure 117



Default selection of HMI is 800xA. To change the selection, click on the name of the HMI. Selected HMI is highlighted in Blue.

If S+ Operations HMI is selected, along with it only one Controller category can be selected at a time for data collection.

Configuration								SI	D35104-dhanraj	۲	
MI System 🕜					Controllers 🕝						
	Performance	Lifecycle	Sotware	Security		Performance	Lifecycle				
Ax00					Harmony	8	5				
reelance					Melody Rack						
+ Operations	2				AC 800M						
					Precentrel P13						
										_	

Figure 117. S+ Operations with Harmony

5. Input configuration screen appears.

6. Under S+ Operations HMI tab, IP range scan input: Enter IP range of all the nodes for which data collection has to be done. Data collection will be done only for the nodes for which the IP address is entered here.

ABB My Co	ntrol System - Data Colle	lector							170	0	×
Configuration									SID35104-Test	0	i
1 Require	d inputfields häve been enabl	led. Provide your inputs on the	m and press Con	tnue							
S+ Operations HMI	Prerequisites Check	Periodic Collection	Harmony	Melody	AC 880M	Procontrol 13					
IP Range Scan 🕜				Ne	w User Credentia	ts 🕜					
Enter only computer i	Ps. Never enter controllers IPs	s here.			User Name						
Start IP address					6110PMSPOUS	er1					
					Password						
End IP address							۲				
		A45					Add				
Scanned IP Range					User Credentia	is for Full Access					
		Remove					Remove				
								E	uck Co	ritinue	

Figure 118. IP Range Scan

7. Provide the IP range and click on **Add** button. User can provide multiple ranges.

ABB My Control System - Data Collector			-	. 0	×
Configuration		SID	5104-Test	٥	i
Required input felds have been enabled. Previde your inputs on them and press Cont	nue .				
S+ Operations HMI Prerequisites Check Periodic Collection Harmony					
IP Range Scan 🕜	New User Credentials 🕜				
Enter only computer IPs. Never enter controllers IPs here.	UserName				
Start IP address	611CPMSPOUSer1				
	Password				
End IP address					
Add	Add				
Scanned IP Range	User Credentials for Full Access				
Remove	Remove				
		Back	Cor	nănue	6

Figure 119. ADD IP Range

8. If a wrong IP range is added, there is an option to remove it. To remove, select the added IP range by clicking on it and then select **Remove**.

9. Harmony INFI-NET Controllers Performance Input: Click on **Harmony** tab to provide input for Harmony controllers data collection. User has option to select INFI-NET or PN800 control network. Provide the below inputs to proceed with INFI-NET controller data collection.

ABB My Cos	strol System - Data Collector					×
Configuration				SID81441-dhanrj	٥	i
 Configu 	e inputs and click on "Certimue" button					
Inputs						
Harmony Per Harmony Inputs	iedic Collection					^
General 🕜		Topology Scan 🕜				Ш
Control Network	Type 💿 INFLINET. 🔿 PN800	Scan All Loops	2			
Logical ICI	1	Losps				Ш
ICI Type	 #17C1 Abit \ Abit 000 	Togelogy File	A summer Transformer			
HAP1 Licensed T	S+ Engineering	0	Hannonyi opologi xini			
HAP1 Request(m	s) 250	Data Collection				
Traverse accross	IE8 🗹	Data Collection Duration(min)	60			
IP address	192 - 168 - 16 -	16 Time Interval Between Samples(sec)	30			
IP Range Scan		Samsles	120			
Start IP as	koreas	LCS Data 🥝				
End IP ac	dress · · ·					
	- An	di contra d				
		Launch LCS Parser				
Scann	ed IP Range		and the second sec			
		LCS input data file	Browse			
						*
				Activate Windows Go to Settings to activate Wind	tows.	
				Dack	Continue	
				0.01.0		

Figure 120. Harmony Rack Tab

General

a) Controller Type: Select INFI-NET as control network type.

b) Logical ICI: Provide the ICI number configured by Harmony System Configuration Utility (hSysCfgU.exe) for connecting into control network.

c) ICI Type: This selection will be done automatically based on Control Network Type selection.

d) HAPI Licensed To: Keep the default input S+ Engineering, unless it is different.

e) HAPI Request (ms): This interval, is the rate at which MCS-DC raise requests to the connected DCS System, in milliseconds and it is the minimum time interval between two consecutive requests to HAPI.

Default value is 250 milliseconds. Higher value will decrease the load on control network. Keep the default input.

f) Traverse across IEB: If IEB bridge is present in the network, MCS-DC can traverse through it and collect data from PN800 network. In this case, user needs to enable the check box and provide the IPT bridge module IP address.



In order to traverse the IEB bridge, a minimum CAPI version of 5.1.0.12 must be used.

- IP Scan Range- This input is applicable only if VPNI/PNI800 ICI Type is selected. Provide the required Controller IP range, Data collection will be done only for the Controllers for which the IP address is entered here.
- Topology Scan

a) Scan All loops:

Check this Check Box to scan all loops

b) Loops: To Scan the specific loops, provide the loop numbers separated with comma (Example: 1, 5, 6). It is must to mention the loop number connected to ICI.

c) Topology File: Provide Name of Harmony Rack topology scan file

Data Collection

Data Collection Duration (min): It is recommended to keep the default input. Please note that the minimum data collection duration which can be set is 6 minutes.

Time Interval Between Samples (sec): It is recommended to keep the default input. Please note that the minimum time interval duration which can be set is 30 Seconds.

Samples: Samples are auto calculated based on the formula Samples = Data Collection Duration*60 / Time Interval Between Samples. Please note that the minimum Samples which can be configured is 10. If a correct value is configured for Data Collection Duration (min) and Time Interval.

Near Samples field, a Green tick mark will appear. If wrong values are entered, a Red cross mark will appear.

- 10. LCS data collection input: If the user already has a valid LCS input data file (.csv), skip this step and proceed to Step 11. For generating a new LCS Input data file, make sure that MCS-DC tool is launched in the Harmony Rack engineering node. In the harmony Rack inputs page, click on Launch LCS Parser button and follow the below procedure.
 - a. Click on **Open Project** button.



Figure 121. Open project

b. Browse and select the required project (.ebp) file, click **Open**.

c. The following window appears with a progress bar as highlighted in Figure 122, which indicates that the data collection process is in progress. Once the data collection process is completed. Click on **Export as CSV** button to generate a new LCS Input data file and save the file in PC.

NOTE: The data collection process may take some time based on the size of the project.

About							
Open Project Export as C	SV						
HarmonyRack	System	Text	Module Type	Loop	Node	Module	Bus Address
4 Control Network1	HarmonyBack	Control Network1	INNISKK	1	2		
 Control Unit 1:2 Control Unit 1:2 	HarmonyBack	Control Network1	INNPMox	1	2	0	
Controller3 [BRC410:31	HarmonyRack	Control Network1	BRC410	1	2	2	
Controller4 [MFP02: 4]	HarmonyBack	Control Network1	BRC410	1	2	3	
Controller5 [MFP02: 5]	HarmonyBack	Control Network1	MFP02	1	2	4	
4 Control Network2	HarmonyBack	Control Network1	MFP02	1	2	5	
4 Control Unit 1: 2	HarmonyRack	Control Network2	INNISxx	2	2		
Controllerz [Dice to: 5]	HarmonyBack	Control Network2	INNPMox.	2	2	0	
Controller2 [BRC400: 21	HarmonyBack	Control Network2	BRC410	2	2	3	
Controller3 [BRC400: 3]	HarmonyBack	Control Network2	INNISxx	2	3	100	
	HarmonyBack	Control Network2	INNPMox	2	3	0	
	HarmonyRack	Control Network2	BRC400	2	3	2	
	HarmonyBack	Control Network2	BRC400	2	3	3	
	Current Pr	oject: C/(Symphony	/Plus\projects\Harmony	/Rack\CH\;HarmonyRz	ck\HarmonyRack.ebp		

Figure 122. Export .CSV File

d. A popup appears as a confirmation that the .csv file is exported successfully. Click **OK**.

My Control System - Da	ata Collector				
Configuration				SID81441-dhanraj	8
Configure inputs and click on	"Continue" button				
Inputs					
armony Periodic Collection					
Logical ICI	1	Loops			
ICI Type	IETICT O VPto /PTx000	Topology File	HarmonyTopology.xml		
HAPILicensed To	S+ Engineering	Data Collection 🕜			
HAPI Request(ms)	250	Data Collection Duration(min)	60		
IP Range Scan 🕜		Time Interval Between Samples(sec)	30		
Enter the Control Network IP's here			5		
Start IP address		Samples	120		
End IP address		LCS Data 🕜			
	2 CH	Interest of the second	í.		
Scanned IP Range		Lauton LUS Partie			
		LCS input data file	Browse		
		Include Edited Modules			
	Remove				
			Reset Save		
				Back Contin	10

11. Click Browse button to select the .csv file generated in the previous step.

Figure 123. Harmony Rack Input Data File

12. Include Edited Module: If modules in the CSV file is to be manually edited to match with physical setup, this check box shall be checked. Also, it is possible to include certain hardware modules in the report for which data cannot be electronically read, if this check box is checked.

This check box applicable for Harmony Rack module and when both performance and LCS data is collected.

 PN800 Network Controller Performance Collection Input: Click on Harmony tab to provide input for Harmony controller data collection. User has option to select INFI-NET or PN800 control network. Provide the below inputs to proceed with PN800 network data collection.

onfiguration				SID35104-Syrd	٢
Configure inputs and	click on "Continue" button				
nputs					
rmony Periodic Collec	ction				
ermony leputs					
General 🕜		Topology Scan			
Control Network Type	 INFINET PN800 	Scan All Loops	8		
Logical ICI	1	Providence and the second			
CIType	O IET/ICT VINI / PNI800	Coops			
API Licensed To	S+ Engineering	reprintly File	Harmon/Topologysml		
(PI Request(ms)	250	Data Collection 🕜			
raverse across IEB		Data Collection Duration(min)	6		
P address		Time Interval Detween Samples(ser)	30		
Range Scan 🔞		o			
Start IP address	172 - 16 - 4 - 220	calibres	14		
		LCS Data 🕜			
End IP address	172 - 16 - 4 - 228	Note: LCS / Module information will be fet:	ched from control network		
	Add				
Scanned ID Dames					
Jeanne Prange					
				Activate Windows	

Figure 124. Harmony Rack

Input a to c is applicable for PN800 network modules performance data collection. Input a to d is applicable for PN800 network modules LCS data collection.

a. General:

1) Controller Type: PN800 control network type.

2) Logical ICI: Provide the ICI number configured by Harmony System Configuration Utility (hSysCfgU.exe) for connecting into control network.

3) HAPI Licensed To: Keep the default input S+ Engineering, unless it is different.

4) HAPI Request (ms): This interval, is the rate at which MCS-DC raise requests to the connected DCS System, in milliseconds and it is the minimum time interval between two consecutive requests to HAPI.

Default value is 250 milliseconds. Higher value will decrease the load on control network. Keep the default input.

5) ICI Type: This selection will be done automatically based on Control Network Type selection. For PN800, VPNI/PNI800 will be selected.

- b. IP Scan Range Provide the required Controller IP range, Data collection will be done only for the Controllers for which the IP address is entered here. Note that PNI800 module IP address must be included in the IP Scan Range, in order to make it part of the collection.
- c. Topology Scan:

1) Scan All loops: Check this Check Box to scan all loops.

2) Loops: To Scan the specific loops, provide the loop numbers separated with comma (Example: 1, 5, 6). It is must to mention the loop number connected to ICI.

3) Topology File: Provide Name of Harmony Rack topology scan file.

d. Data Collection:

1) Data Collection Duration (min): It is recommended to keep the default input. Please note that the minimum data collection duration which can be set is 6 minutes.

2) Time Interval Between Samples (sec): It is recommended to keep the default input. Please note that the minimum time interval duration which can be set is 30 Seconds.

3) Samples: Samples are auto calculated based on the formula Samples = Data Collection Duration*60 / Time Interval Between Samples.

Please note that the minimum Samples which can be configured is 10. If a correct value is configured for Data Collection Duration (min) and Time Interval.

Near Samples field, a Green tick mark will appear. If wrong values are configured, a Red cross mark will appear.

- 14. Symphony Din and ENM controller Input, IP Scan Range: Provide the required Controller IP range and click on **Add**. User can provide multiple IP ranges. Data collection will be done only for the Controllers within the IP Address range that has been entered.
- 15. If a wrong IP range is added, there is an option to remove that. To remove a wrong IP range, select the IP range by clicking on it and then click on the **Remove** button. Click **Continue** to proceed.

16. Once all HMI and connect inputs are provided, it is required to acknowledge that all the prerequisites for data collection, collection are met. For this, select the Prerequisites tab and confirm each of these by checking the check box against them. Please note, this is only an acknowledgment that user has verified all the prerequisites for proceeding with data collection. For more details, refer Section 2, Prerequisites.

A	My Control System - Data Collector			-	0	×
0	Configuration			SID35104-Test	٥	i
(Required input fields have been evabled. Provide your inputs on them and press Centinue					
S+ (Operations IIMI Prerequisites Check Periodic Collection					
Plea	se continu all the following prevequalities after complying. Refer prevequicities section of MCSDO user manual for dataled procedure					
	Pringuite	Confirmation				
	Verly that Microsoft Net Framework 4.0 or above is installed on all nodes for which data have to be collected.	R				
	Tum on File and Pister shating for all network profiles on all nodes.	9				
	Stat "Windows Management Instrumentation" services if it is not alwady running on all nodes	P				
	Enable Windows Management Instrumentation (AVIII) in windows firewall exception lat on all nodes.	P				
	Confirm if the administrator privileged user ore-dentials of all nodes are provided as input for this collection.	P				
	Percete WNI access permission about d be provided from all the nodes.	P				
	Tread, understood and accept the terms and conditions described on the end user locate agreement (EULA) of this product. (EULA can be opened from information window)	P				
1	Al previountes related to selected cortroller(s) are met.	P				
Note	C Presse make sure to recent the processing charges back to original staticulars, whet the collection process is complete.					
				Back C	onătive	

Figure 125. Prerequisite Check

17. Click on the **Continue** button to proceed to collection screen.

18. Collection screen appears. Collection screen contains three parts. The top part contains command buttons for various actions by the user, progress bar and status message area. The middle part contains table to list the list of HMI nodes and controllers, that are part of data collection process and their respective status related to Scan, Agent Deployment and Data collection operations. The bottom section contains the log messages.

ollector					
				SI012345-Test	0
Stat Deploy Agents Sta	th Callection	Customice	Cancel		
ev.					
Device Type	Scan Statun	August Deployment Status	Collection Status		Remarks
	•	Logs			
	Dation Agenta 20 20 20 20 20 20 20 20 20 20 20 20 20	Dekriger Danten V	Control Control	• Description Statistics Castri	DOUDLING COMMAN COMA

Figure 126. Data Collection Screen

19. When the collection screen first appears, only Scan button is enabled. Click on the **Scan** button to scan the available/reachable nodes for data collection. 20. Progress bar shows the progress of scanning.

Continue de Calution					CIDAT	
Conditional D Concent					SIUT	315-Test @
ted lime: 00:00:07	Scan Depity Agents 5	tart Collection	Custoria	Carcol		
s 'Scar' button to start scanning for node	reachability					
				_		
1016:						
rices						
		1 1	A construction of the second distance			
Devices	Device type	Scan Status Fert Acad Cables	Agent Deployment Matus	Cullecture Status	10-17118-89-91	Part
-949629	COBSNE				IP3 172 (6 90.01	
			Logs			
			Interference with our print party of a 175 of a 174 period	a .		
# 0-06-1016.0311			septuate means to the reading of the reading of	9 C		

Figure 127. Scan Progress

- 21. Computers and controllers that are accessible from the MCS-DC launch node, are listed on the first column of the table shown on this page. Their types are listed on the second column. Scan status are shown on the third column. If the node is accessible the status is "Success" in Green. If the node is not accessible the status is "Failed" in Red. However if the accessibility status can't be checked at this point (for example AC 800M controller), then the status is "Not applicable" in Grey.
- 22. The possible reasons for the failed scans are indicated under the Remarks column. Furthermore, a message appears on the user interface prompting the user to either rescan (partially or fully) or proceed with agent deployment. Users may fix the issue and re-scan the failed nodes by clicking the **Scan** button again. Remarks column also indicates the IP address used for accessing the nodes.

23. Once node scan is completed, Deploy Agents and Customize buttons will be enabled. User can customize the collection by selecting required HMI/controller nodes from the list of accessible nodes, using customize option. Clicking on the **Customize** button opens customization window.

ABB My Control System - Da	ta Collector				- 0
Configuration Collection					SID12345-Test
Bapsed Time: 00:00:11	Scan Depley Appedia	Bart Collection	Cadorile	Carcel	
Click on Topploy Agents' button to start deploy	ing the agent or click on "Contemization" button to contemize th	e selection			
Progress:					8
Devices					
Devices	Device Type	Scan Status	Agent Deployment Status	Collection Status	Fernark
SPO_SPOC20	Controller	Not Applicable	Not Darlord	NitStated	IPs: 172 16.89.91
WIN-YF2FIMETV3L	Consulter	Secress	Not Starting	Pict Started	IP. 172.16.4 104 ,Role(s): S+ Historian Server,S+ Operado
og					
fine			Logs		
2020-08-10 16:00 32			Compared the Brain Status		
2020-06-10 16:03:22			Compared deployment for all the nodes		
2020-08-10 16:03:22			Completed Deproyment Check for Node 172.15 A 104		

Figure 128. Scan Status
24. User has an option to customize the Data collection nodes for Performance and Lifecycle data collection, to Customize click on the **Customize** button. All accessible HMI and controller nodes are listed. All accessible HMI and controller nodes will be selected by default. User can de-select the nodes that are not desired to be collected, by un-checking the respective check boxes, against the node names. Clicking on OK button will save the customization configuration and close the customize window. Clicking on **Reset** button will reset the customization configuration. Please note, that controller customization is not available for this release.

Configuration d Caleedian		SIDN29-5 Text	ø	
nuns Selscius Esta Catago Iba Selscita				
V Daveum	T 🕑 🛡 Cartalers			
🛃 🖷 -62018_66	😴 💭 101.75 (filla) W			
🗹 🛡 9,2019-08	JC 700F210C700F 11323E4 18			
🖓 🗰 30348 C 11	Internet in the state of the			
	🕜 🖷 Jokkater (Josake - 72-6 k za			
	📈 📱 JOSSOFRUT (HÖDDIRL-1751-16, ALSO			

Figure 129. Node Selection

25. Data category selection is possible for Performance data collection and partially for Lifecycle data collection. All the data categories are selected by default. User shall de-select the data categories, that are not desired to be collected by un-checking the respective check boxes against the data category names. Click on **OK** button to save the customization configuration and close the customize window. Click on **Reset** button if you wish to reset the customization configuration. Data categories customization is applicable only for HMI nodes, it is not applicable for controllers.

ABB My Control System - Data Collector	
Onfiguration	SID12345-Test
Node Selection Data Categories Selection	
💌 🗹 🗰 Data Categories	
► 😌 🗮 System	
Computer	

Figure 130. Data Category Selection

26. Click on the **Deploy Agents** button to deploy data collection agents on all the HMI nodes listed. MCS-DC performs data collection of HMI nodes through these data collection agents.

My Control System - Da	ta Collector				
Configuration Collection					SID12345-Test
lapsed Time: 00:00:11	Scan Deplet Aperts S	tet Collection	Castorite	Ciecel	
lick on Topicy Agents' Indian to start depky	ing the agent or click on "Culturezation" button to customize th	e selection			
rogross:					
Sevices					
Devices	Device Type	Scan Status	Agent Deployment States	Collection Status	Persark
IPO_SPDC20	Controller	NetApplicable	Not Stadies	NatOtarted	IPs 17216.88.81
NIN-YF2FINE IV3L	Computer	Excess	Not Started	NitStated	IP 17215.4 104 (Rolets) S+ Historian Server,S+ Operado
og					
lener			Lop		
2020-06-10 16:03:22			Completed the Scan Status		
1920-08-10 16:03:22			Completed deployment for all the nodes		

Figure 131. Start Collection

- 27. Once the data collection agents are successfully deployed on the HMI nodes, Success status is shown under Agent Deployment Status column. If agent deployment fails for any node, same is indicated (similar to Scan status). At this point, Start Collection button is enabled. Click on the **Start Collection** button to start the data collection.
- 28. Data collection progress can be seen on the progress bar and on the Collection Status column.
- 29. Once the data collection is completed, Result screen appears. Result screen contains three parts, the top part contains the command buttons for various user actions, the middle part contains information about the hardware tree and the bottom part contains the collection statistics.

30. Collection file is created automatically once the collection is completed. The collection file is created, and its file path appears on the screen. The collection file can be viewed by clicking on the file path.

HMI System 💡	Performance	Lifecycle							
800×A	Performance	Lifecycle			Controllers 🤫				
800×A			Software	Security		Performance	Lifecycle		
					Harmony				
Freelance					Melody Rack				
S+ Operations	~	~		~	AC 800M				
					Procontrol P13				

Figure 132. Collection File Path

31. Click on the **New collection** button to get back the Configuration screen and start with a new collection. Select the **Exit** button to close MCS-DC.

3.4.4 Advanced mode data collection for S+ Operations with Melody Controllers

- Copy the downloaded files of MCS-DC into the local disk (hard disk drive partition for Operating System) of a desired System S+ Operations node. Unzip the downloaded MCS-DC package. Depending on the HMI/Controller, MCS-DC launch nodes may vary. For S+ Operations with Melody Controllers, Melody Rack engineering node or any S+ Operations node which is part of Onet network and S+ Operations network, shall be used. Additionally CSE_Config file has to be synchronized in the node.
- 2. Double-click on the **MCS-DC_Launcher.exe**, to launch the tool. It is present inside the unzipped MCS-DC folder. The initial screen appears as shown in Figure. MCS-DC tool runs the below checks on the launch node. If the check is passed, a Green tick mark is shown, click the Launch button to proceed for data collection. If the check fails, a Red Cross mark is shown, user has to fix the issue and launch the MCS-DC tool again.

A	B	•	My	Contro	System - Data Collector			×
		5			a second second second second second second			F 1
					MCS-DC			
					0			
					.Net version check			
					User privilege check 🥝			
					Disk space check 🥥			
					MCS-DC launch drive check			
					New collection Merging of data files			
					Close ⊘ Launch →			
÷.								

Figure 133. MCS-DC Launcher

• .NET Framework version check.

If the .NET Framework version is 1.1 or above, then this check is passed and MCS-DC 2.X version can be launched for data collection.

If the .NET Framework version is lower than 1.1, then this check is failed and MCS-DC 2.X version cannot be launched for data collection, instead MCS-DC 1.9.x version will be launched for data collection. Please refer MCS-DC 1.9.x user manual for data collection procedure.

• Prerequisites check.

Below prerequisites are validated. User can proceed for data collection only if these checks are passed.

a) User Privileges Check, checks if the MCS-DC Tool is launched in the user account with administrator privileges.

b) System drive launch check, MCS-DC tool must be launched only from the local disk drive of the launch node.

c) Required Disk Space Check, Free disk space of at least 500MB must be available on the disk drive from which the MCS-DC is launched. 3. Provide the System ID of the S+ Operations HMI and your full name and provide password for encryption. This password will be used for encrypting collected data and create system data file. Decryption of the collected data is possible only at 3 places, namely, My Control System web, My Control System On-premise and My Control System Portable. To use the system data file at My Control System Portable, the user needs to enter the same password, which is entered here, to decrypt the data. So, remember this password. Once all the required inputs are provided, select Advanced Mode. Upon clicking on the OK button, validation of System ID and Collected by fields are executed. Tick mark appears if validation succeeds and cross marks appear when validation fails against respective fields. Correct the errors and click on the OK button to proceed further.

Sys	em ID					?
SID	234					
Coll	ected By					
test						
Pro	vide passw	vord for encrypt	tion (Enter be	tween 8-16 characte	r)	
Re-e	nter passv	word				
****	****	~				۲
		Basic Mode		Advanced Mo	de	
Prov Re-e	ride passw ***** nter passw *****	word for encrypt	ion (Enter be	Advanced Mo ystem automatically. U	de ser must select th	e

Figure 134. System credentials for Advanced Mode

4. Configuration screen appears. Click S+ Operations On the left pane and select the check box for the required data category (Performance, Life Cycle). Similarly, Select Harmony on the right pane and select the check box for the required data category (Performance, Life Cycle) and/or Security. Security option shall select only when it is needed as it will take significantly longer time for data collection. Click Continue. Figure 135



Default selection of HMI is 800xA. To change the selection, click on the name of the HMI. Selected HMI is highlighted in Blue.

If S+ Operations HMI is selected, along with it only one Controller category can be selected at a time for data collection.

ABB My Control	System - Data C	ollector							-	٥	×
Configuration								SID	15184-dhanraj	٥	i
HMI System 🕜					Controllers 🕜						
	Performance	Lifecycle	Software	Security		Performance	Lifecycle				
A×008					Harmony						
Freelance					Melody Rack						
S+ Operations		v			AC 800M						
					Precentrel P13						
									0	onănue	

Figure 135. S+ Operations with Melody

5. Input configuration screen appears.

6. Under S+ Operations HMI tab, IP range scan input: Enter IP range of all the nodes for which data collection has to be done. Data collection will be done only for the nodes for which the IP address is entered here.

ABB My Con	trol System - Data Coll	lector				-		×
Configuration	0					SID35104-Test	۲	i
() Require	l input fields have been enab	iled. Pravide your inputs on the	m and press Cordinu	e				
S+ Operations HMI	Prerequisites Check	Periodic Collection	Melody					
IP Range Scan 🕜				New User Credentials				
Enter only computer I	Ps. Never enter controllers IPs	s here.		UserName				
Stad ID address				6110PMSPOUSer1				
				Password				
End IP address					۲			
		Add			Add			
Scanned IP Range				User Credentials for Full Access				
		Remove			Remove			
						Back Co	ontinue	

Figure 136. IP Range Scan

- 7. Provide the IP range and click on **Add** button. User can provide multiple ranges too.
- 8. If a wrong IP range is added, there is option to remove that. To remove, select the added IP range by clicking on it and then click on the **Remove** button.

- 9. Next input is user credential. Provide the User Name and Password of an administrator user to access all the HMI nodes for data collection. Alternatively, select an administrator user account from the drop-down list. Click on the Add button. Please note, for nodes in domain network, username should be provided in the format domain name\username.
- 10. There is an option to remove the added credentials. To remove, select the added credential and click on the **Remove** button.
- 11. Click on **Melody Rack** tab to provide input for Melody Rack controllers data collection (refer to Appendix D, System configuration export for exporting system configuration files).

ABB My Cont	N System - Data Collector		-	•	×
Configuration		SID35104-Te	est	0	i
() Required	Juf felds have been enabled. Provide your imputs on Prem and paies Continue				
S+ Operations HMI	Yrerequisites Check Periodic Collection Molody				
Melody Inputs 🕜					
Melody Island Devices	C (shalf apold 2 singul Rec Miledy dhu Shang one Browse				
CSE_Conf file	Cruster apdit 2 Vireal Res Media CSE, CODE Encode				
Asset export folder	Devandra De				
Engineering Server IP	12 · 16 · 16				
UserName	(11)998-5901au2				
Password	@				
		Back	Contin	104	

Figure 137. Melody Rack Data Collection Input

Provide the below inputs to proceed with Melody Rack controllers data collection and click Continue.

a. Melody Island Devices

Click the **Browse** button to select the Melody Island Devices Export file.

b. CSE_Conf File

Click the **Browse** button to select the Current CSE_Conf File.

c. Asset Export Folder

Click the **Browse** button to select the Asset Export Folder.

d. Composer Melody node IP Address

Enter the IP Address of S+ Engineering Server, where Composer Melody is installed.

e. Username

Provide the Composer Melody node user name.

f. Password

Provide the Composer Melody node password.

12. Once all HMI and connect inputs are provided, it is required to acknowledge that all the prerequisites for data collection, are met. For this, click the tab Prerequisites and confirm each prerequisites by checking the check box against them. Please note, this is only an acknowledgment that user has verified all the prerequisites for proceeding with data collection. For more details, refer Section 2, Prerequisites.

ABB My Control System - Data Collector				- 0	×
Configuration			SID35104-Te	st ©	i
Required input fields have been enabled. Provi	de your inputs on them and press Continue				
S+ Operations HMI Prerequisites Check Peri	odic Collection				
Please confirm all the following prerequisities after complying. R	efergenrequisities section of MCSDC user manual for detailed procedure				
	Peroculates	Continuation			
Verly that Microsoft Net Framework 4 Dior above is installed on a	I nodes for which data have to be collected.	v			
Tum on File and Printer shating for all network profiles on all node	1	4			
Stat "Windows Management Instrumentation" service from service	ses if it is not already running on all nodes.	u			
Enable Windows Management Instrumentation (WWI) in windows	frewall exception list on all nodes.	P2			
Confirm if the administrator privileged user credentials of all nodes	are provided as input for this collection.	9			
Renote WMI access permission should be provided from all the ry	odes.	2			
I read, undentood and accept the terms and conditions described	I on the end user license agreement (EULA) of this product. (EULA can be opened from information window).	12			
 All prerequisites related to selected controller(s) are met. 		1			
Note: Please make sure to revert the prerequisite changes b	ack to original state/values, after the collection process is complete.				
			Back	Continue	

Figure 138. Prerequisite Check

13. Click on the **Continue** button to proceed to collection screen.

14. Collection screen appears. Collection screen contains three parts. The top part contains command buttons for various actions by the user, progress bar and status message area. The middle part contains table to list the list of HMI nodes and controllers, that are part of data collection process and their respective status related to Scan, Agent Deployment and Data collection operations. The bottom section contains the log messages.

ABB My Control System - Data Co	llector				- 0
Configuration					51012345-Test
apsed Time: 00:00:00	Deploy Agents Sta	f Callection	Customize	Canoel	
uss 'Scar' belien to start scanning for node reachability	in the second se				
NCTO SEC					
reices					
Devices	Device Type	Scan Statun	Agent Deployment Status	Collection Status	Pers
1					
118			Logo		

Figure 139. Data Collection Screen

15. When the collection screen first appears, only Scan button is enabled. Click on the **Scan** button to scan the available/reachable nodes for data collection. 16. Progress bar shows the progress of scanning.

Configuration O Collection					SID	12345.Test 💿
ued Time: 00:00:07	Read Possible baseds	that Consultion	Custom	2000		
	Contraction of the Contraction o		CONTR	Contraction of the second s		
s scar white is start scarraight note	reachanny					
nes						
1						
icos						
Devices	Device Type	Scan Status	Agent Deployment Status	Collection Status		Farr
_SPDC30	Controller	NotAssicable	Not Started	Not Started	IPs 17216.88.81	
			Logs			
66-1016.0211			HOST DATES AND AN \$2 196 10/2, P. 172 16 4 104 6 10/0	0		

Figure 140. Scan Progress

- 17. Computers and controllers that are accessible from the MCS-DC launch node, are listed on the first column of the table shown on this page. Their types are listed on the second column. Scan status are shown on the third column. If the node is accessible the status is "Success" in Green. If the node is not accessible the status is "Failed" in Red. However if the accessibility status can't be checked at this point (for example AC 800M controller), then the status is "Not applicable" in Grey.
- 18. The possible reasons for the failed scans are indicated under the Remarks column. Furthermore, a message appears on the user interface prompting the user to either rescan (partially or fully) or proceed with agent deployment. Users may fix the issue and re-scan the failed nodes by clicking the Scan button again. Remarks column also indicates the IP address used for accessing the nodes.

19. Once node scan is completed, Deploy Agents and Customize buttons will be enabled. User can customize the collection by choosing only few HMI/controller nodes from the list of accessible nodes, using customize option. Clicking on the **Customize** button opens customization window.

ABB My Control System - I	Data Collector				- 0 X
Configuration Collection	4				SID1Z345-Test
Elapsed Time: 00:00:11	Scan Detity Apents	Start Collection	Cattorio	Carcel	
Click on Topplay Agents' button to start depic	ying the agent or click on "Castemization" button to customize	the selection			
Progress:					
Danivan					
SPO SPOTO	Device Type Controlar	Not Accilculate	Agent Deployment Status	Collection Status Not Started	10+ 172 (6 00 01
WIN-YT2FINETV3L	Cornauter	Secence	Not Starbor	Piet Started	IP 17216.4.104 (Role(s) S+ Histotian Server,S+ Operatorie
<u>.</u>					
Log					1
Tana			Logs		•
2020-08-10 16:03 32			Completed the Scan Status		1
2020-06-10 16:03 22			Completed septoyment for all the nodeo		
2023-04-10 16:03 22			Completed Deproyment Chack for Noda 172.18.4.104		

Figure 141. Scan Status

20. User has an option to customize the Data collection nodes for Performance and Lifecycle data collection, to Customize click on the **Customize** button. All accessible HMI and controller nodes are listed. All accessible HMI and controller nodes will be selected by default. User shall de-select the nodes that are not desired to be collected, by un-checking the respective check boxes, against the node names. Clicking on OK button will save the customization configuration and close the customize window. Clicking on **Reset** button will reset the customization configuration. Please note, that controller customization is not available for this release.

Configuration 👩 Collection		\$10120-5 Text	4
Nuevo Setekturi Esta Caroleo Nel Setekturi			
Y 🖓 🛢 Computer	v 😴 🗮 Consters		
🖂 🖷 -Luci Vojato	😴 💭 193 265 B 1-3 88 B		
SC-8115-08	💟 💷 AG 7839° (9407'900° - 1172-1844' 1 12		
203k9041	🐼 💷 20 KROFAR GODRA 1 12 16 1.11		
	10 KKGF H (2020KF): 172 - 8 4 20]		
	Jo skor sl.r. pictom L. H 30 46 King		

Figure 142. Node Selection

- 21. Data category selection is possible for Performance data collection and partially for Lifecycle data collection. All the data categories are selected by default. User shall de-select the data categories, that are not desired to be collected by un-checking the respective check boxes against the data category names. Click on **OK** button to save the customization configuration and close the customize window. Click on **Reset** button if you wish to reset the customization configuration. Data categories customization is applicable only for HMI nodes, it is not applicable for controllers.
- 22. Click on the **Deploy Agents** button to deploy data collection agents on all the HMI nodes listed. MCS-DC performs data collection of HMI nodes through these data collection agents.

ABB My Control System - I	Data Collector				- 0
Configuration Collection					SID12345-Test
lapsed Time: 00:00:11	Stan Detilay Agents	Start Collection	Castorio	Carcel	
lick on Treplay Agents' button to start deploy	ing the agent or click on "Castemization" button to custom	the selection			
hogross:					
Devices					
Devices	Device Type	Scon Status	Agoot Deployment Status	Collection Status	Bemarks
SPO_SPDC20	Controller	Not Applicable	Not Darled	Not Starled	IPs 17216.88.81
WIN-YT2F1WE1V3L	Cornauter	Secrets	Not Starbig	Piet Started	IP. 172.16.4 104 (Role(s): S+ Historian Server,S+ Operator
99					
Tana			Logs		•
2020-06-10 16:03-22			Completed the Scan Status		
2020-06-10 16:03-22			Completed apployment for all the nodeo		
			Commented Designers and Character Stellands 173 18 4 104		

Figure 143. Start Collection

- 23. Once the data collection agents are successfully deployed on the HMI nodes, Success status is shown under Agent Deployment Status column. If agent deployment fails for any node, same is indicated (similar to Scan status). At this point, Start Collection button will get enabled. Click on the **Start Collection** button to start the data collection.
- 24. Data collection progress can be seen on the progress bar and on the Collection Status column.

- 25. Once the data collection is completed, Result screen appears. Result screen contains three parts, the top part contains the command buttons for various user actions, the middle part contains information about the hardware tree and the bottom part contains the collection statistics.
- 26. Collection file will be created automatically once the collection is completed. The collection file is created, and its file path appears on the screen. The collection file can be viewed by clicking on the file path.

				2020 2020
Configuration Collect	ttion 🔕 Result			SID81441-dhanraj 🗇 1
Below is output path			Start New Collection	Ext
The Path : C:ISPDCISPDC2.2.2.0	2108.26002'Master Install/Output/SID81441_202	10831 0053 S+ Operations Melody PL.zip		
Hardware Tree				
🖤 S+ Operations , S+ Operations			Property Name	Property Value
Computers			System	Symphony Plus Operations
• 🜉 Controllers			System Version	
• 💭 Melody				
PM 876 EP002609				
			4	
Result Summary			<u>1</u>	
Result Summary Detected nodes during node scan :	3	Collection Start Time : 0031/2	< 021 00:53:25	
Result Summary Detected nodes during node scan : Selected nodes by the User :	3	Collection Start Time : 00/31/2 Collection End Time : 00/31/2	4 021 00:53:25 021 00:55:00	
Result Summary Detected nodes during node scan : Selected nodes by the User : Successfully collected nodes :	3 3 3	Collection Start Time : 00/31/2 Collection End Time : 00/31/2	✓] Ø21 00:55:25 Ø21 00:55:00	
Result Summary Detected nodes during node scan : Selected nodes by the User : Successfully collected nodes : Nodes with collection failures :	3 3 9	Callection Start Time : 00/31/2 Callection End Time : 00/31/2	41 021 00:53:25 0221 00:55:00	

Figure 144. Collection File Path

27. Click on the **New collection** button to get back the Configuration screen and start with a new collection. Select the **Exit** button to close MCS-DC.

3.4.5 Advanced mode data collection for S+ Operations with AC800M Controllers

- Copy the downloaded files of MCS-DC into the local disk (hard disk drive partition for Operating System) of a desired System S+ Operations node. Unzip the downloaded MCS-DC package. Depending on the HMI/Controller, MCS-DC launch nodes may vary. For S+ Operations with AC 800M Controllers, any S+ Operations node or AC 800M engineering node shall be used as launch node.
- 2. Double-click on the **MCS-DC_Launcher.exe**, to launch the tool. It is present inside the unzipped MCS-DC folder. The initial screen appears as shown in Figure. MCS-DC tool runs the below checks on the launch node. If the check is passed, a Green tick mark is shown, click the Launch button to proceed for data collection. If the check fails, a Red Cross mark is shown, user has to fix the issue and launch the MCS-DC tool again.

ABB	My Control System - Data Collector	×
		1
	MCS-DC	e.
	0	
	.Net version check	91
	User privilege check	
	Disk space check	
	MCS-DC launch drive check	
	New collection Merging of data files	
	Close	
		6
5 X X		50

Figure 145. MCS-DC Launcher

• .NET Framework version check.

If the .NET Framework version is 1.1 or above, then this check is passed and MCS-DC 2.X version can be launched for data collection.

If the .NET Framework version is lower than 1.1, then this check is failed and MCS-DC 2.X version cannot be launched for data collection, instead MCS-DC 1.9.x version will be launched for data collection. Please refer MCS-DC 1.9.x user manual for data collection procedure.

• Prerequisites check.

Below prerequisites are validated. User can proceed for data collection only if these checks are passed.

a) User Privileges Check, checks if the MCS-DC is launched in the user account with administrator privileges.

b) System drive launch check, MCS-DC must be launched only from the local disk drive of the launch node.

c) Required Disk Space Check, Free disk space of at least 500MB must be available on the disk drive from which the MCS-DC is launched. 3. Provide the System ID of the S+ Operations HMI and your full name and provide password for encryption. This password will be used for encrypting collected data and create system data file. Decryption of the collected data is possible only at 3 places, namely, My Control System web, My Control System On-premise and My Control System Portable. To use the system data file at My Control System Portable, the user needs to enter the same password, which is entered here, to decrypt the data. So, remember this password. Once all the required inputs are provided, select Advanced Mode. Upon clicking on the OK button, validation of System ID and Collected by fields are executed. Tick mark appears if validation succeeds and cross marks appear when validation fails against respective fields. Correct the errors and click on the OK button to proceed further.

	System ID		?
0	SID1234		
	Collected By		
0	test		
0	Provide password for encryption (Enter betwee	n 8-16 character)	0
	Re-enter password		
0	****		0
	O Basic Mode	Advanced Mode	
	In the advanced mode, MCS-DC will not detect the system HMI and controller systems manually. User will be able to systems that are supported by MCS-DC, are supported in	n automatically. User must selec customize the data collection. A the advanced mode. Click on th	t the

Figure 146. System credential For Advance Mode

4. Configuration screen appears. Click S+ Operations On the left pane and select the check box for the required data category (Performance, Life Cycle). Similarly, Select Harmony on the right pane and select the check box for the required data category (Performance, Life Cycle) and/or Security. Security option shall select only when it is needed as it will take significantly longer time for data collection. Click Continue. Figure 117



Default selection of HMI is 800xA. To change the selection, click on the name of the HMI. Selected HMI is highlighted in Blue.

If S+ Operations HMI is selected, along with it only one Controller category can be selected at a time for data collection.

ABB My Contro	ol System - Data C	ollector						-	•	×
Configuration								SID35104-dhanraj	۲	i
HMI System 🕜					Controllers					
	Performance	Lifecycle	Software	Security		Performance	Lifecycle			
Ax008					Harmony					
Freelance					Melody Rack					
S+ Operations					AC 800M					
					Procentrol P13					
								Ce	ntinue	

Figure 147. SPO with AC800M

- 5. Input configuration screen appears.
- 6. Under S+ Operations HMI tab, IP range scan input: Enter IP range of all the node for which data collection has to be done. Data collection will be done only for the node for which the IP address is entered here.

ABB My Control System - Data Collector		- o ×
Configuration		SID35104-Test 🐵 i
Required input fields have been enabled. Previde your inputs on them and p	ss Confinue	
S+ Operations HMI Prerequisites Check Periodic Collection AC	08	
IP Range Scan 🕜	New liser Credentials 🥝	
Enter only computer IPs. Never enter controllers IPs here.	UserName	
Start IP address	611CPMGPOUSer1	
	Password	
End P address		
Add	Add	
Scanned IP Range	User Credentials for Full Access	
Remove	Remove	
		Back Cordinue

Figure 148. IP Range Scan

- 7. Provide the IP range and click on **Add** button. User can provide multiple ranges too.
- 8. If a wrong IP range is added, there is option to remove that. To remove, select the added IP range by clicking on it and then click on the **Remove** button.

- 9. Next input is user credential. Provide the User Name and Password of an administrator user to access all the HMI nodes for data collection. Alternatively, select an administrator user account from the drop-down list. Click the Add button. Please note, for nodes in domain network, username should be provided in the format domain name\username.
- 10. There is an option to remove the added credentials. To remove, select the added credential and click on the **Remove** button.
- 11. Click on **AC 800M** tab to provide input for AC 800M controllers data collection.

		r		- 2
Configuration			SID35104-Test	
Required input fel	ids have been enabled. Provide your inputs on th	em and press Continue		
Operations HMI Prere	quisites Check Periodic Collection	AC BOOM		
OM Imputs 🕜				
AC 800M Engineering Client -	S			
AC 800M Engineering Client IP	172.16.4.50			
UserName	611HVDOM/SPOUser1			
Password		Get AC BDM Project		
AC BEEM project				
ACBOM or S+ Operations with Hence basic user mode cannot Browse for project folder	AC800M is not supporting in current build, so sys be used for this system. Callect data using Adva	Am mould not be detected automaticatly noted user mode, after restarting MCSDC		
ACBOOM or S- Operations with Hence basic user mode cannot Browse for project folder Select project	AC80M is not supporting in current build, so sys be used for this system. Collect data using Adva	ohn ouvid net de déchérie a doministiculy. Novel sier mole, a fair institution (b. 5500) Braves		
AC800M of S+ Operations with Hence basic user mode canno Browse for project folder Select project	AC800M is not supporting in current build, so sys be used for this system. Called data using Aova	In market in the fetting automatically Sold automatically better Bronze		
ACIDIDII of S- Operations with Hence basic user mode canno Browse for project folder Select project	AC2000 is not supporting in current burlet, so pry to superflucting system. Could data using Abu	olan asukun te ketenta automakoloj. Solan alam one, alte enantalis (k. ESC) Brenz V		
CODIN of S- Operations with Hence balar user mode canno Browne for project folder Select project	AC-3000 in ordinage in control had us to a the state for the system. Could also also a	in market of the statistical submarketing.		

Figure 149. AC 800M Data Collection Input

Provide the below inputs if the MCS-DC is not launched on an AC 800 M engineering node.

- AC 800M Engineering Client: Below inputs must be provided if the MCS-DC is not launched on an AC 800 M engineering node. Provide the inputs and click on **Get AC 800 M Project** button.
- a. Provide AC 800M engineering client IP
- b. Provide user name of an user account of the engineering client with administrative right
- c. Provide password of the user account
- AC 800M Project:
- a. Browse For AC800M Project Folder by clicking Browse button.
- b. Select the required AC800M project from the drop down list.

- 12. Input AC 800M Project: If the MCS-DC is launched on an AC 800 M engineering Client, the recent Project and the Project folder is auto populated. User can select the inputs as required.
 - Browse For Project Folder
 Browse the AC 800 M Project
 - Select Project Select the required AC 800 M project

Operation Second system Second syste	mini Operation Date Particular Date State Sta	My Control Sys	tem - Data Collector	
Magnet by and factor have base are astale. Bonder you input as in have not approx Calendar Operations Magnet by and factor have base are astale. Bonder you input as in have not approx Calendar I I I I CaleName	Applied rege date date has been analyzed. Provide (not input to the men and provid Continual	Configuration		SID01441-dhanraj
Operations SIME Precession Conference 1 CONTENT process Conference Confere	Num Pereparative Periodic Collection AC 000000000000000000000000000000000000	Required input fel	ds have been enabled. Provide your inputs on them and press Continue	
AC MORE registering Clear (P) Kith F12 (2004) (K) Kith F12 (K) Kith	yaccestor Collect yaccestor C	Operations HMI Prereg	uisitos Check Periodic Collection AC 803M	
AC 1004 Projections Case AC 1004 Projections AC 1004 Projections AC 1004 Projection	Segments Case I Segments Case I A Segments Case I A Segments Case I Segments Case I			
Ac SING Appendix of Carlos Ac SING Appendix Ac SING Appen		AC 9000 Environment Claud		
Une former Personer At EMM endows At EMM endows At EMM endows	erection of the second	AC SOM Engineering Client P	Wei-F072Disetter	
Constrained Partnered Constrained Constr	Control 1000 Friday Control 1000 Fri			
Presented OKKC SERIE Project AC SERIE public Control Series AC SERIE Project AC SERIE public Control Series AC SERIE Project Series Ser	West Implementation of the second s	Opermanne		
AC 1989 period. A 2019 per de Spandere vels AC 1999 i se el quandra ja novembala, con senim solari esta senim data de A 2019 per de Spandere vels AC 1999 i se el quandra ja novembala, con selementar el constante de provisiones de A 2019 per de Spandere vels AC 1999 i se el quandra de la constante de anterioristica de la constante de provisiones de la constante de provisiones de la constante de provisiones de la constante de provisiones de la constante de provisiones de la constante de la const	Operations with ACCENT a sub-spectrum provide source and the provide automaticative in an order and used and the support. Calcular pain and Advances and the spectrum provides (pPort instant training) Interview EVEX INTERVIEW EVEX INTERVIEW EVEX INTERVIEW EVEX INTERVIEW	Passend	Get AC 800M Project	
AC USE project AC STORE or provident with AC USES is not functionally a control ball, so provide a data with a dat	Col: Col: <td< th=""><th></th><th></th><th></th></td<>			
ACIDITY of 5-dynathers with ACIDITY is not supporting in commit bala, so system could call be extended yatematicate. Hence basis was more trades assued to this system. Claude data samp Advected our more, where realisting DPOC	10- Speedward ACRIMIN Land Speedman Hannel Land Land Hannel	AC 800M project		
	renardbeer Citelitinshumint CostaCorpani Co ed (PCOTOC:p:	AC808M or S+ Operations with	ACTION is not supporting in current build, so system could not be detected automaticate, build used to this evolute: Collect table current Advanced user monte, after restances (EPDC)	
	ed processor v			
Rhowse for preject bases C wild/in invustile (T DataCompart C Browse	ed proproca v	Evolution for project to idea	C Milli industrial (T Dataillingineer (T Datail ompart Dr.	
Sewarani et SPOSPDC29 v		Select project	SPOSPDC20	
				UKO, COM

Figure 150. Browse and Select AC 800M Project

13. Once all HMI and connect inputs are provided, it is required to acknowledge that all the prerequisites for data collection, are met. For this, click the tab Prerequisites and confirm each prerequisites by checking the check box against them. Please note, this is only an acknowledgment that user has verified all the prerequisites for proceeding with data collection. For more details, refer Section 2, Prerequisites.

ABB My Control System - Data Collector		-	0
Configuration		SID35104-Test	0
Required input fields have been enabled. Provide your inputs on them and press Continue			
S+ Operations IIMI Prerequisites Check Periodic Collection			
Please cardim all the bilining prinequalities after completing Refer prinequalities section with CSDC user manual for dataset proceeding			
Presquates	Confirmation		
Verty that Blacosoft Net Transvork 4.0 or above is installed on all notes for which data have to be collected.			
tum on the and interest stanged at hereix protection on an nodes.	P		
and insure ready the design of the second seco	17		
Chase subove subover subovers instrumentation (simily in whooks measure-sception at one at node).			
Contract the administrative prompto user orientation are private as egut to the contract.	17		
nervote wini access permanent mous performance in the nodes.	P		
read, understood and accept the terms and conditions described on the end user torne agreement (EULA) of this product, (EULA can be spend from information window).	9		
Note: Please make sore to meet the prorequisite changes back to original statebolines, wher the collection process is complete.			
		Back Co	เกลิกษะ

Figure 151. Prerequisite Check

14. Click on the **Continue** button to proceed to collection screen.

15. Collection screen appears. Collection screen contains three parts. The top part contains command buttons for various actions by the user, progress bar and status message area. The middle part contains table to list the list of HMI nodes and controllers, that are part of data collection process and their respective status related to Scan, Agent Deployment and Data collection operations. The bottom section contains the log messages.

Configuration O Collection					SID12215 Test 6
d line: 00:00:00	Deploy Agents Sta	rf Collection	Castories	Cancel	30/(30/18)
Scar' ballon to start scanning for node reachability					
s					
Destars	Parales Tana	Town Fisher	Record Fundamented Filming	Collection Distor	
UNITS	contro (geo	activities and a	adhur tudaillanan achara	Constant states	
					2
			• Logs		

Figure 152. Data Collection Screen

16. When the collection screen first appears, only Scan button is enabled. Click on the **Scan** button to scan the available/reachable nodes for data collection. 17. Progress bar shows the progress of scanning.

Configuration D Collection					SI	12345.Test
ued Time: 00:00:07		and Consultant				
	DEAR LANDER ADATES D	an condon	Conne	Cartal		
s Scar when to start scanning for node i	exhanily					
1996						
ices						
Devices	Davice Type	Scan Status	Agent Deployment Status	Collection Status		P
SPDC20	Cordisitier	NotReplicable	Not Started	Fict Started	IPs 17216-88.81	
					100	
			• Logs			
			Hostname WIN-VF2F1WE1V3L, P: 172 16 4.104 is four-	d		
>001016.0311						

Figure 153. Scan Progress

- 18. Computers and controllers that are accessible from the MCS-DC launch node, are listed on the first column of the table shown on this page. Their types are listed on the second column. Scan status are shown on the third column. If the node is accessible the status is "Success" in Green. If the node is not accessible the status is "Failed" in Red. However if the accessibility status can't be checked at this point (for example AC 800M controller), then the status is "Not applicable" in Grey.
- 19. The possible reasons for the failed scans are indicated under the Remarks column. Furthermore, a message appears on the user interface prompting the user to either rescan (partially or fully) or proceed with agent deployment. Users may fix the issue and re-scan the failed nodes by clicking the **Scan** button again. Remarks column also indicates the IP address used for accessing the nodes.

20. Once node scan is completed, Deploy Agents and Customize buttons will be enabled. User can customize the collection by choosing only few HMI/controller nodes from the list of accessible nodes, using customize option. Clicking on the **Customize** button opens customization window.

ABB My Control System - D	ata Collector				- a >
Configuration Collection	a -				SID1Z345-Test
Sapsed Time: 00:00:11	Scan Deplay Agends	Start Collection	Custome	+ Carcel	
lick on Topicy Agents' bullan to start depic	ying the agent or click on 'Casternization' tector to casternize	the selection			
Transies -					
Davices					
Devices	Device Type	Scan Status	Agent Deployment Status	Collection Status	Femarks
SPO_SPDC20	Controller	Not Applicable	Not Etarted	Net Started	IPs: 172.16.89.81
WIN-YT2FTMETV3L	Computer	Baccaso	Not Studiet	Pist Started	IP. 172.16.4 104 (Releta): D+ Hedodan Dever, D+ Operations
99					
line			· Logs		•
1920-08-10 16:03-32			Completed the Scan Status		
2020-06-10 16:03-22			Completed deployment for all the nodes		
2020-08-10 16:03:22			Completed Deproyment Check for Node 172.15 A 104		

Figure 154. Scan Status

21. User has an option to customize the Data collection nodes for Performance and Lifecycle data collection, to Customize click on the **Customize** button. All accessible HMI and controller nodes are listed. All accessible HMI and controller nodes will be selected by default. User shall de-select the nodes that are not desired to be collected, by un-checking the respective check boxes, against the node names. Clicking on OK button will save the customization configuration and close the customize window. Clicking on **Reset** button will reset the customization configuration. Please note, that controller customization is not available for this release.

erigenster 18 Gebielen 18 Gebielen		5-0428-5 Text	4	
IN ONTRADU LOUI GARDAN INCOMINAN				
Coverant	*√ U €catales			
🗑 🛡 Sattune	V 💭 - 181,229 (1.1,3 + 8)			
Refer S	2 D JATNET LACTION - 172-814 13			
📿 🗰 35344641	🕑 🔳 Jerman zu besannte inzen eine			
	🖉 🗰 Jokket Ni (2000/P - 122-6 4 00)			
	🛹 💭 Jarman al 7 (kadala). Haz eel king			

Figure 155. Node Selection

- 22. Data category selection is possible for Performance data collection and partially for Lifecycle data collection. All the data categories are selected by default. User shall de-select the data categories, that are not desired to be collected by un-checking the respective check boxes against the data category names. Click on **OK** button to save the customization configuration and close the customize window. Click on **Reset** button if you wish to reset the customization configuration. Data categories customization is applicable only for HMI nodes, it is not applicable for controllers.
- 23. Click on the **Deploy Agents** button to deploy data collection agents on all the HMI nodes listed. MCS-DC performs data collection of HMI nodes through these data collection agents.

ABB My Control System - D.	ata Collector				
Configuration	1				SID12345-Test
lapsed Time: 00:00:11	Scan DeclarAcycle 5	tad Collection	Castorite	Carcel	
ick on Teploy Agents' button to start deplo	ying the agent or click on "Contemization" buffen to customize th	e selection		//5222	
Devices					
Devices	Device Type	Scan Status	Agent Deployment Status	Collection Status	Fernario
SPO_SPDC20	Controller	Not Applicable	Not Dartez	NotStarted	IPs: 172.16.88.81
NIN-YT2FINETV3L	Corraster	Baccaso	Not Stadiet	Piet Started	IP 17218.4.104 (Releta): D+Hedotan Derver, D+ Operado
og					
line			Logs		
2020-08-10 16:03:22			Completed the Scan Status		
2020-06-10 16:03:22			Completed deployment for all the nodeo		
020-08-10 16:03:32			Completed Deployment Check for Node 172.15 A 104		

Figure 156. Start Collection

24. Once the data collection agents are successfully deployed on the HMI nodes, Success status is shown under Agent Deployment Status column. If agent deployment fails for any node, same is indicated (similar to Scan status). At this point, Start Collection button will get enabled. Click on the **Start Collection** button to start the data collection.

- 25. Data collection progress can be seen on the progress bar and on the Collection Status column.
- 26. Once the data collection is completed, Result screen appears. Result screen contains three parts, the top part contains the command buttons for various user actions, the middle part contains information about the hardware tree and the bottom part contains the collection statistics.
- 27. Collection file will be created automatically once the collection is completed. The collection file is created, and its file path appears on the screen. The collection file can be viewed by clicking on the file path.

Ass My Control System Data Collector		:
🖨 Configuration 👩 Collection 🔕 Result		SID81441 dhanraj 🛞
Below is output path File Path: <u>C11SPDC12PAA122196-200_SPDC_Tool_v2.2_Bela32PAA122196</u>	Start New Collector.	Ext 🕐
Hardware Tree		
S+ Operations _ S+ Operations	Property Name	Property Value
Computers		
• 💭 Controllers		
- 💭 AC800M		
 AC 800M, SPO_SPDC20 		
PM066.0		
C1854, 1		
	xI	
Result Summary		
Detected nodes during node scan : 2	Collection Start Time : 08/31/2021 13:42:21	
Selected nodes by the User : 2	Collection End Time : 08/31/2021 13:44:38	
Successfully collected nodes : 2		

Figure 157. Collection File Path

28. Click on the **New collection** button to get back the Configuration screen and start with a new collection. Clicking on the **Exit** button to close the MCS-DC application.

3.4.6 Advanced mode data collection for S+ Operations with Procontrol P13

- Copy the downloaded files of MCS-DC into the local disk (hard disk drive partition for Operating System) of a desired System S+ Operations node. Unzip the downloaded MCS-DC package. Depending on the HMI/Controller, MCS-DC launch nodes may vary. For S+ Operations with P13 Controllers, any S+ Operations node shall be used as launch node.
- 2. Double-click on the **MCS-DC_Launcher.exe**, to launch the tool. It is present inside the unzipped MCS-DC folder. The initial screen appears as shown in Figure. MCS-DC executes the below checks, on the launch node. If the checks are passed, a Green tick mark is shown, click the Launch button to proceed for data collection. If any check fails, a Red Cross mark is shown: "The issue must be resolved before launching MCS-DC again".



Figure 158. MCS-DC Launcher

• .NET Framework version check.

If the .NET Framework version is 1.1 or above, then this check is passed and MCS-DC 2.X version can be launched for data collection.

If the .NET Framework version is lower than 1.1, then this check is failed and MCS-DC 2.X version cannot be launched for data collection, instead MCS-DC 1.9.x version will be launched for data collection. Please refer MCS-DC 1.9.x user manual for data collection procedure.

• Prerequisites check.

Below prerequisites are validated. User can proceed for data collection only if these checks are passed.

a) User Privileges Check, checks if the MCS-DC is launched in the user account with administrator privileges.

b) System drive launch check, MCS-DC must be launched only from the local disk drive of the launch node.

c) Required Disk Space Check, Free disk space of at least 500MB must be available on the disk drive from which the MCS-DC is launched. 3. Provide the System ID of the S+ Operations HMI and your full name and provide password for encryption. This password will be used for encrypting collected data and create system data file. Decryption of the collected data is possible only at 3 places, namely, My Control System web, My Control System On-premise and My Control System Portable. To use the system data file at My Control System Portable, the user needs to enter the same password, which is entered here, to decrypt the data. So, remember this password. Once all the required inputs are provided, select Advanced Mode. Upon clicking on the OK button, validation of System ID and Collected by fields are executed. Tick mark appears if validation succeeds and cross marks appear when validation fails against respective fields. Correct the errors and click on the OK button to proceed further.

	System ID	0		
0	SID1234			
	Collected By			
0	test			
0	Provide password for encryption (Enter between 8-16	character)		
	Re-enter password			
~	*******	0		
	O Basic Mode Adva	nced Mode		
-	In the advanced mode, MCS-DC will not detect the system autom. HMI and controller systems manually. User will be able to custom systems that are supported by MCS-DC, are supported in the adv.	atically. User must select the ize the data collection. All anced mode. Click on the OK		

Figure 159. System credential For Advance Mode
4. Configuration screen appears. Click S+ Operations On the left pane and select the check box for the required data category (Performance, Life Cycle). Similarly, Select Harmony on the right pane and select the check box for the required data category (Performance, Life Cycle) and/or Security. Security option shall select only when it is needed as it will take significantly longer time for data collection. Click Continue. Figure 117



Default selection of HMI is 800xA. To change the selection, click on the name of the HMI. Selected HMI is highlighted in Blue.

If S+ Operations HMI is selected, along with it only one Controller category can be selected at a time for data collection.

ABB My Contr	ol System - Data C	ollector						-	۵	×
Configuration								SID35104 dhanraj	٥	i
HMI System 🕜					Controllers 🕝					
	Performance	Lifecycle	Software	Security		Performance	Lifecycle			
800×A					Harmony					
Freelance					Meledy Rack					
S+ Operations	2	1		2	AC 800M					
					Precentrel P13					
									Continue	

Figure 160. S+ Operations with P13

5. Input configuration screen appears.

6. Under S+ Operations HMI tab, IP range scan input: Enter IP range of all the node for which data collection has to be done. Data collection will be done only for the node for which the IP address is entered here.

ABB My Control System - Data Collector		-	o ×
Configuration		SID35104-Test	© i
() Required input fields have been enabled. Previde your inputs on them and p	ress Contrue		
S+ Operations HMI Prerequisites Check Periodic Collection Proce	ntrol 13		
IP Range Scan 📀	New User Credentials 🕜		
Enter only computer IPs. Never enter controllers IPs have.	User Name		
Start IP address	611CPIMSPOUSer1		
	Password		
End IP address			
Ads	Add		
Scanned IP Range	User Credentials for Full Access		
Remove	Remove		
		Back C	orfänue

Figure 161. IP Range Scan

- 7. Provide the IP range and click on **Add** button. User can provide multiple ranges too.
- 8. If a wrong IP range is added, there is option to remove that. To remove, select the added IP range by clicking on it and then click on the **Remove** button.

- 9. Next input is user credential. Provide the User Name and Password of an administrator user to access all the HMI nodes for data collection. Alternatively, select an administrator user account from the drop-down list. Click the Add button. Please note, for nodes in domain network, username should be provided in the format domain name\username.
- 10. There is an option to remove the added credentials. To remove, select the added credential and click on the **Remove** button.
- 11. Click on **Procontrol P13** tab to provide input for Procontrol P13 controllers data collection. Click on **Browse** button to select the latest P13 source file (.CSV), taken from P13 engineering node.

ABB My Co	ntrol System - Data Colle	ector					3	- 1	o >
Configuration							SID35104-Tes	4 4	0 i
() Require	ed input fields have been enable	ad. Provide your inputs on th	em and press Continue						
S+ Operations HMI	Prerequisites Check	Periodic Collection	Procentrol 13						
Procontrol Inputs									
Export P13 controller hardw	rare configuration data as a CS ¹	V file with field separator as	comma () and fext sepa	arator as double quote (*). Give	that CSV/file as input here.				
P13 Source File	Cribuld up do 2.2 linput File P1	3-AGY1\HW/CSV	Browse						
		Parse	Eat						
							Back	Contin	.e

Figure 162. Procontrol P13 tab

12. Once all HMI and connect inputs are provided, it is required to acknowledge that all the prerequisites for data collection, are met. For this, click the tab Prerequisites and confirm each prerequisites by checking the check box against them. Please note, this is only an acknowledgment that user has verified all the prerequisites for proceeding with data collection. For more details, refer Section 2, Prerequisites.

ABB My Control System - Data Collector		-	- 0	×
Configuration		SID35104-Test	٥	i
Required input fields have been enabled. Provide your input) on them and press Continue				
S+ Operations IMI Prerequisites Check Periodic Collection				
Please cordim at the following presequations after complying. Refer presequations section of INCEDC user manual for detailed procedure				
Prenequates	Confirmation			
Verly that Microsoft Net Framework 4.0 or above is installed on all nodes for which data have to be collected.	9			
Tum on File and Printer sharing for all network profiles on all nodes.	4			
Stat "Windows Nanagesent Instrumentation" services if it is not already running on all nodes.	P			
Enable Windows Management Instrumentation (WW) in windows frewall exception kit on all nodes.	4			
Confirm if the administrator privileged user oredentials of all nodes are privided as input for this collection.	P			
Renote WNI access persission should be provided from all the nodes.	5			
I read, undentood and accept the term and conditions described on the end user license agreement (EULA) of this product. (EULA can be spended from information window).	5			
 All prerequisites related to selected controller(i) are met. 	12			
Note: Please made sure to revert the prerequisite charges back to original statistates, after the collection process is complete.				
		Back	Continue	

Figure 163. Prerequisite Check

13. Click on the **Continue** button to proceed to collection screen.

14. Collection screen appears. Collection screen contains three parts. The top part contains command buttons for various actions by the user, progress bar and status message area. The middle part contains table to list the list of HMI nodes and controllers, that are part of data collection process and their respective status related to Scan, Agent Deployment and Data collection operations. The bottom section contains the log messages.

ABB My Control System - Data Co	llector				- 0
Configuration 🙆 Collection					SID12345-Test
lapsed lime: 00:00:00	Deploy Agents Stat	Callection	Curtoria	Cancel	
tess Scarf butter to start scanning for node reachability					
ngress					
bevices					
Devices	Device Type	Scan Status	Agent Deployment Status	Collection Status	Benarks
E-					
т».		1.	Ion		

Figure 164. Data Collection Screen

15. When the collection screen first appears, only Scan button is enabled. Click on the **Scan** button to scan the available/reachable nodes for data collection. 16. Progress bar shows the progress of scanning.

My Control System - Da	ta Collector					
Configuration 🙆 Collection					SID	2345.Test 💿
ed lime: 00:00:07	Rige Dentw Angels S	tert Conjection	Customin	527(4)		
Scar' button to start scanning for node r	oschahilty					
996						2
icos						
Devices	Device Type	Scen Status	Annul Destoyment Status	Collection Status		Par
(SPDC20	Controller	NotApplicable	Not Started	Fist Started	IPs 172.16.88.81	
		3	• Logs			
00010100311			Hostname Whi/VF2F1ME1V3L, IP. 172 16.4.104 is four	d		
0.054014.0311			List of pingable IPs are ready			

Figure 165. Scan Progress

- 17. Computers and controllers that are accessible from the MCS-DC launch node, are listed on the first column of the table shown on this page. Their types are listed on the second column. Scan status are shown on the third column. If the node is accessible the status is "Success" in Green. If the node is not accessible the status is "Failed" in Red. However if the accessibility status can't be checked at this point (for example AC 800M controller), then the status is "Not applicable" in Grey.
- 18. The possible reasons for the failed scans are indicated under the Remarks column. Furthermore, a message appears on the user interface prompting the user to either rescan (partially or fully) or proceed with agent deployment. Users may fix the issue and re-scan the failed nodes by clicking the Scan button again. Remarks column also indicates the IP address used for accessing the nodes.

 Once node scan is completed, Deploy Agents and Customize buttons will be enabled. User can customize the collection by choosing only few HMI/controller nodes from the list of accessible nodes, using customize option. Clicking on the **Customize** button opens customization window.

ABB My Control System - D	ata Collector				- 0 >
Configuration O Collection			1-1		SID12345-Test
Sapsed Time: 00:00:11	Scan Detter Aperts	Start Collection	Castoria	Carcel	
lick on Teploy Agents' Indian to start deploy	Ang the agent or click on "Castemization" button to customize t	he solution			
hogress:					
Devices					
Devices	Device Type	Scan Status	Agent Deployment Status	Collection Status	Pernarka
SPO_SPDC20	Controller	NetApplicable	Not Dravbed	Not Ditwised	IPs 172 16.88.81
WIN-YE2FINE IV3L	Conduter	Baccess	NICERATED	Nel Stated	IP. 17216.4.104 (Role(s): S+ Histoxian Server,S+ Operator
og					
fine			· Logi		
2020-06-10 16:03:22			Completed the Scan Status		
2020-06-10 16:03:22			Completed deployment for all the nodes		
2020-06-10 16:03:22			Compreted Deproyment Check for Node 172.18.4.104		

Figure 166. Scan Status

20. User has an option to customize the Data collection nodes for Performance and Lifecycle data collection, to Customize click on the **Customize** button. All accessible HMI and controller nodes are listed. All accessible HMI and controller nodes will be selected by default. User shall de-select the nodes that are not desired to be collected, by un-checking the respective check boxes, against the node names. Clicking on OK button will save the customization configuration and close the customize window. Clicking on **Reset** button will reset the customization configuration. Please note, that controller customization is not available for this release.

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🗷 🗰 303/00%1	2			
	🗠 🖷 Jó kkötiti (ködökit - 192-6.4.20)			
	🗢 📥 то кнашати Моракат над ке иний			
				- *

Figure 167. Node Selection

21. Data category selection is possible for Performance data collection and partially for Lifecycle data collection. All the data categories are selected by default. User shall de-select the data categories, that are not desired to be collected by un-checking the respective check boxes against the data category names. Click on **OK** button to save the customization configuration and close the customize window. Click on **Reset** button if you wish to reset the customization configuration. Data categories customization is applicable only for HMI nodes, it is not applicable for controllers.

			-
Configuration O Collection		SID12345-Test	0
orrenan Erocf Naming Massagen			
Node Selection Data Calegories Selection			
Oata Categories			
V 🗹 🖤 Sestem Applications			
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🖂 🖷 Splus Registry Settings			
🔄 🛡 SplysConfiguration			
🔄 🖷 DomainControllerDiagnotten			
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🗹 🛡 SplusHistorianBlatus			
😢 🐺 SpiusMultmasteolikgnment			
🗹 🛡 @PausLogFiles			
V V Network			
🔀 🖷 Natvosidapta rinformation			
🔄 💭 UserGroupsInformation	×		
			4

Figure 168. Data Category Selection

22. Click on the **Deploy Agents** button to deploy data collection agents on all the HMI nodes listed. MCS-DC performs data collection of HMI nodes through these data collection agents.

ABB My Control System - D	Data Collector				- a x
Configuration Collection					51012345.Test 0 j
Bapsed Time: 00:00:11	Scan Deplay Aperts	Stat Collection	Cutorie	Cascal	
lick on Teploy Agents' Julian to start digit	loying the agent or click on "Castemization" butter to customize ?	de selection			
Devices					
Devices	Device Type	Scon Status	Agent Deployment Status	Collection Status	Fernaria
SPO_SPDC20	Controller	NetApplicable	Not Started	Not Diarted	IPs 172.16.88.81
AIN-YT2FINETV3L	Corriguter	Baccass	NotStanket	NH Stated	IP. 172.16.4.104 (Role(s): D+ Historian Derver,D+ Operations
4					2
Log					6
Time			Logs		•
2020-08-10 16 03 22			Completed the Scan Status		
2020-06-10 16:03:22			Completed deployment for all the nodes		
2023-06-10 16:03 22			Compreted Deproyment Check for Node 172.18.4.104		

Figure 169. Start Collection

- 23. Once the data collection agents are successfully deployed on the HMI nodes, Success status is shown under Agent Deployment Status column. If agent deployment fails for any node, same is indicated (similar to Scan status). At this point, Start Collection button will get enabled. Click on the **Start Collection** button to start the data collection.
- 24. Data collection progress can be seen on the progress bar and on the Collection Status column.
- 25. Once the data collection is completed, Result screen appears. Result screen contains three parts, the top part contains the command buttons for various user actions, the middle part contains information about the hardware tree and the bottom part contains the collection statistics.

26. Collection file will be created automatically once the collection is completed. The collection file is created, and its file path appears on the screen. The collection file can be viewed by clicking on the file path.

Configuration Collection Result			SID81441-dhanraj 🛞 j
Below is output path File Path : CTSPDC1SPDC2.2.2.2.02108.26002Mester InstallOutput/SID81441.2021(Stat New Collecton 831 0103 S+ Operations .P13 PL zp	Ext	0
Hardware Tree			
S+ Operations , S+ Operations	Property	Name	Property Value
Computers			
• 💭 Controllers			
• 💭 P13			
 P13, Controller_0 			
🔹 💭 P13 Control,			
• 💭 Rack, Rack- 01 CRC14FE Rack, 01 CRC14FE			
 Back, Rack: 01CRC14FF Rack, 01CRC14FF 			
 Rack, Rack: 010R014F0 Rack, 010R014F0 			
Back, Rack- 01 CRC14EH Rack, 01 CRC14EH			
Result Summary			
Detected nodes during node scan : 2	Collection Start Time : 08/31/2021 01:03:27		
Selected nodes by the User : 2	Collection End Time : 08/31/2021 01:04:33		
Successfully collected nodes : 2			

Figure 170. Collection File Path

- 27. Click on the **New collection** button to get back the Configuration screen and start with a new collection. Clicking on the **Exit** button to close the MCS-DC application.
- 28. Click on Hardware tree tab to view the hardware tree structure.

3.4.7 Security Data Collection from non-ABB Systems

Collection of cyber security fingerprint data from non-ABB windows based control system, is possible using MCS-DC. Follow the steps given below.

- 1. Copy the downloaded files of MCS-DC into the local disk (hard disk drive partition for Operating System) of a desired System node in the control system. Unzip the downloaded MCS-DC package.
- 2. Double-click on the **MCS-DC_Launcher.exe**, to launch the tool. It is present inside the unzipped MCS-DC folder. The initial screen appears as shown in Figure. MCS-DC executes the below checks, on the launch node. If the checks are passed, a Green tick mark is shown, click the Launch button to

proceed for data collection. If any check fails, a Red Cross mark is shown: "The issue must be resolved before launching MCS-DC again".

ABB	My Control System - Data Collector	×
1		
	MCS-DC	
	0	
	.Net version check	
	User privilege check	
	Disk space check	
	MCS-DC launch drive check	
	New collection Merging of data files	
	Close ⊘ Launch →	
$\gamma = \pi - \pi$		

Figure 171. MCS-DC Launcher

• .NET Framework version check.

If the .NET Framework version is 1.1 or above, then this check is passed. However, for Non-ABB system security data collection, minimum .Net framework version required is 3.5 SP1. Ensure that this prerequisite is met, before proceeding with data collection.

If the .NET Framework version is lower than 1.1, then this check is failed and MCS-DC 2.X version cannot be launched for data collection, instead MCS-DC 1.9.x version will be launched. However, MCS-DC1.9 does not support Non-ABB system data collection.

• Other Prerequisites check.

Below prerequisites are validated. User can proceed for data collection only if these checks are passed.

- a. User Privileges Check, checks if the MCS-DC is launched in the user account with administrator privileges.
- b. System drive launch check, MCS-DC must be launched only from the local disk drive of the launch node.
- c. Required Disk Space Check, Free disk space of at least 500MB must be available on the disk drive from which the MCS-DC is launched.
- 3. Provide System ID, user's full name and password for encryption. System ID should be in the format SID <number> (e.g. SID123). The password will be used for encrypting collected data and create system data file. Decryption of the collected data is possible only at 3 places, namely, My Control System web, My Control System On-premise and My Control System Portable. To use the system data file at My Control System Portable, the user needs to enter the same password, which is entered here, to decrypt the data. So, remember this password. Once all the required inputs are provided, select Advanced Mode. Upon clicking on the OK button, validation of System ID and Collected by fields are executed. Tick mark appears if validation succeeds and cross marks appear when

validation fails against respective fields. Correct the errors and click on the **OK** button to proceed further.

	System ID	3
0	SID1234	
	Collected By	
0	test	
0	Provide password for encryption (Enter between 8-16 c	haracter)
	Re-enter password	
0	********	
	O Basic Mode Advan	ced Mode
	n the advanced mode, MCS-DC will not detect the system automa HMI and controller systems manually. User will be able to customiz systems that are supported by MCS-DC, are supported in the adva sutton to continue.	tically. User must select the ethe data collection. All nced mode. Click on the OK

Figure 172. System credential For Advance Mode

4. Configuration screen appears. Click Non-ABB System on the left pane and select the check box Security. Click Continue.

ABB My Contr	ol System - Data C	ollector				-	•	×
Configuration						SID35104.NonABB	0	i
HMI System 🕜					Controllers			
100xA Freelance S • Operations Non-ADII System	Performance	Lifecycle	Software	Security (X)	Lontrollers			
							ontinue	

Figure 173. Non-ABB System

- 5. Input configuration screen appears.
- 6. Under Non-ABB System tab, enter IP range of all the node for which data collection has to be done. Data collection will be done only for the node for which the IP address is entered here. After providing the IP range, click **Add**. User can provide multiple ranges too.
- 7. If a wrong IP range is added, there is option to remove that. To remove, select the added IP range by clicking on it and then click on the **Remove** button.
- 8. Next input is user credential. Provide the **User Name** and **Password** of an administrator user to access all the HMI nodes for data collection. Alternatively, select an administrator user account from the drop-down list. Click the **Add** button. Please note, for nodes in domain network, username should be provided in the format domain name\user name.

9. There is an option to remove the added credentials. To remove, select the added credential and click on the **Remove** button.

My Control System - Data Collector		- a >
Configuration		\$1035104.Non588 @
Inputs Inputs		
Non-ABB System Periodic Collection Prerequisites Check		
IP Range Scan	New User Credentials	
Enter the range of computer IP a go this network	User Nume (in the format domain name/username for domain system)	
Start IP address		
Entil Address	Patowad	
Control of the second		
Add	A00	
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10 140 44 95 To 10 140 44 99	Interpretational and the Address	
	the state of the s	
Dames	Control of	
		first Content
		Look Optimize

Figure 174. IP range and user credentials

10. Once all inputs are provided, it is required to acknowledge that all the prerequisites for data collection, are met. For this, click the tab Prerequisites and confirm each prerequisites by checking the check box against them. Please note, this is only an acknowledgment that user has

verified all the prerequisites for proceeding with data collection. For more details, refer Section 2, Prerequisites.

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Figure 175. Prerequisites check

- 11. Click on the **Continue** button to proceed to collection screen.
- 12. Collection screen appears. Collection screen contains three parts. The top part contains command buttons for various actions by the user, progress bar and status message area. The middle part contains table to list the list of HMI nodes and controllers, that are part of data collection process

and their respective status related to Scan, Agent Deployment and Data collection operations. The bottom section contains the log messages.

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Time: 00.00.00	Denicy Agents Sta	et Calection	Curtania	Cancel	
ican' butten to start scanning for node reachability					
Destars	Paratas Dans	From Finders	Access Frankrammed Filmbor	Collection Fisher	
DEWOR	Device type	Scan Status	Adout Debrokussus Scittus	CONCLUM STATUS	
			Logs		

Figure 176. Data Collection Screen

13. When the collection screen first appears, only Scan button is enabled. Click on the **Scan** button to scan the available/reachable nodes for data collection. 14. Progress bar shows the progress of scanning.

My Control System - Dat	a Collector					- 0
Configuration O Colection					SID1	045.Test 🔘
ued Time: 00.00.07	BLan Deploy Agents 5	tart Conection	Customer	Cartes		
s Scar button to start scanning for node re	actuality					
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-				111		
lices						
Devices	Device Type	Scan Status	Agent Deployment Status	Collection Status		Ferna
5_SPDC20	Controllar	Hot Applicable	Not Started	Hat Started	IPs 172.16.88.81	
e de la companya de l			• Logs			
0-06-10 18:03 11			Hostname WIN-W2F1ME1V0L, P. 172 16 4 104 is found	L.		
0.06-10 16:03 11			List of pingable IPs are ready			
			100000000000000000000000000000000000000			

Figure 177. Scan Progress

- 15. Computers and controllers that are accessible from the MCS-DC launch node, are listed on the first column of the table shown on this page. Their types are listed on the second column. Scan status are shown on the third column. If the node is accessible the status is "Success" in Green. If the node is not accessible the status is "Failed" in Red. However if the accessibility status can't be checked at this point (for example AC 800M controller), then the status is "Not applicable" in Grey.
- 16. The possible reasons for the failed scans are indicated under the Remarks column. Furthermore, a message appears on the user interface prompting the user to either rescan (partially or fully) or proceed with agent deployment. Users may fix the issue and re-scan the failed nodes by clicking the **Scan** button again. Remarks column also indicates the IP address used for accessing the nodes.
- 17. Once node scan is completed, Deploy Agents and Customize buttons will be enabled. User can customize the collection by choosing only few

HMI/controller nodes from the list of accessible nodes, using customize option. Clicking on the **Customize** button opens customization window.

My Control System - Dar	a Collector				
Configuration O Collection					SID12345-Test
apsed Tame: 00:00:11	Scan Deplay Acerta S	dat Col+tion	Castoria	CHICH	
ick on Topicy Agents' bullion to start deploye	ng the agent or click on "Contemization" button to contemize th	an soluction			
naress					
Devices					
Devices	Device Type	Scan Status	Agent Deployment Status	Collection Status	Pernarka
3P0_SPDC20	Controller	NetApplicable	Not Starter	Not Diarted	IPs: 172.16.89.91
NIN-YESFINE IVSL	Conauter	Escress	Not Startied	Not Stated	IP. 172.16.4.104 (Roletz): S+ Habitan Server,S+ Operation
99					
Titter .		12	· Loui		
2020-06-10 16:03 22			Completed the Scan Status		
2020-06-10 16:03:22			Completed reployment for all the nodes		

Figure 178. Scan Status

18. User has an option to customize the Data collection nodes for Performance and Lifecycle data collection, to Customize click on the **Customize** button. All accessible HMI and controller nodes are listed. All accessible HMI and controller nodes will be selected by default. User shall de-select the nodes that are not desired to be collected, by un-checking the respective check boxes, against the node names. Clicking on OK button will save the customization configuration and close the customize window. Clicking on **Reset** button will reset the customization configuration. Please note, that controller customization is not available for this release.

S International Statement Contractor		-	8
Ereligensise 👩 Ereliefles		980428-5 Text	0
Nunas autoseturi - Euros Cataleon Ins-OnthiceEur			
Consum	v ⊻ ♥ Cartalio		
Y	😴 🗰 ratura tikiaka		
📝 🗰 70,8119-01	International (1997) 112 104 18		
🐼 🗰 203/00/K1	Jekkoras perioras (1974)		
	Jo 4kon H: (K000kF: 172-8.420)		
	🗢 💼 ho exat ant led anaminetist kerwiell		

Figure 179. Node Selection

19. Click on the **Deploy Agents** button to deploy data collection agents on all the HMI nodes listed. MCS-DC performs data collection of HMI nodes through these data collection agents.

ABB My Control System - Da	ita Collector				
Configuration Collectors					SID12345-Test
Bapsed Tene: 00:00:11	Stan DeliveAcente 1	Stat Collector	Cathorie	Catcel	
Click on Toppley Agents' Italian to star sliping	Ang the agent or clack on "Contemportation" button to contempore to	ta selection			
Progress					
Devices					
Devices	Device Type	Scan Status	Agent Deployment Status	Collection Status	Remarks
SPO_SPOC20	Controller	TiatApplicable	Not Startes	Pist Diarbaci	IPs:172.16.80.81
WIN-YESTIMETVSL	Consuler	Baccass	NotStaded	Pri Osta	IP. 172.16.4 104 (Rolets): D+ Hadotan Server, D+ Operations
.og					
Tanat			• Logi		•
2023-06-10 16:03 22			Company the Scan State		1
2020/07-10/15/02/22			Compared reportant of all the holes		
2020-09-10 10:03:22			Compared papersing Character Node 11216 4 104		

Figure 180. Start Collection

- 20. Once the data collection agents are successfully deployed on the HMI nodes, Success status is shown under Agent Deployment Status column. If agent deployment fails for any node, same is indicated (similar to Scan status). At this point, Start Collection button will get enabled. Click on the **Start Collection** button to start the data collection.
- 21. Data collection progress can be seen on the progress bar and on the Collection Status column.
- 22. Once the data collection is completed, Result screen appears. Result screen contains three parts, the top part contains the command buttons for various user actions, the middle part contains information about the hardware tree and the bottom part contains the collection statistics.

23. Collection file will be created automatically once the collection is completed. The collection file is created, and its file path appears on the screen. The collection file can be viewed by clicking on the file path.

The system - Data Collector			- 0
Configuration Collection Result			SID81441 dhanraj 🛞
Below is output path	Start N	ew Collection	EXA
File Path : C::SPOC2.2.2.2.02101.26002Master InstallOutput/SI011441.20	0210331 0103 S+ Operations P13 PL ap		
Hardware Tree			
 W S+ Operations, S+ Operations 		Property Name	Property Value
Computers			
• 🛡 Contollers			
• 💭 P13			
🔹 💭 Pt3, Controller_0			
👻 💭 P13 Control,			
• 💭 Rack, Rack- 01 GRC14FE Rack, 01 GRC14FE			
 Back, Rack: 01 CRC14FF Rack, 01 CRC14FF 			
 Back, Rack 010R014F0 Rack, 010R014F0 			
Back, Rack-01CRC14EH Rack, 01CRC14EH			
Result Summary			
Detected nodes during node scan : 2	Collection Start Time : 08/31/2021 01	:03:27	
Selected nodes by the User : 2	Collection End Time : 08/31/2021 01	04:33	
Successfully collected nodes : 2			

Figure 181. Collection File Path

24. Click the **Exit** button to close the MCS-DC application.

3.4.8 S+ Historian in 800xA or third party HMI environment

Collection of S+ Historian data in 800xA or third party HMI environment is possible using MCS-DC. However, this cannot be achieved in a single step. The data must be collected in two instances and merged using MCS-DC's merge functionality described in Section 4.1, Post Collection Procedure. Follow the steps below to collect the S+ Historian data from the HMIs other than Symphony Plus.

- Collect the HMI system data using the method described in previous sections (e.g if the system is 800xA with connects, follow the Section 3.4.1, Data Collection Process. If it is non-ABB Windows based control system, follow the Section 3.4.7, Data Collection Process).
- 2. For collecting S+ Historian data, HMI needs to be selected as S+ Operations. Follow the procedure to collect S+ Operations data mentioned in Section 3.4.3, Data Collection Process. Note that no controllers must be selected during this collection.

3. Follow the procedure mentioned in Section 4.1, Post Collection Procedure to merge the data files generated in step 1 and step 2.

3.5 Periodic Data Collection

Scheduler functionality is implemented in MCS-DC to collect performance and life cycle data periodically. Data collection is scheduled to run silently so that no manual intervention is required, once configured.

Configuration		SID35104-Test
Inputs 00xA MMI ESXI Periodic Callection Prerequisites Circle		
Enable Periodic Data Callection User credentials with 'Log on as a service' privilege	Cable Foreards Collegation	
User Name (61hvdorr/NBOnainstaller	MCS freeworks Gateway Configuration	
Password were to be valid	Put 6001 Detabution Folder Para	
Scheduler Configuration 🔞	Drows the file	
Stat Time (Hours)	Secured Communication 👔	
Periodic Options	Secured Communication	
Dely	TLS Communication TLS 1.0 v	
	Client Certificate	
C viewy	Strowie the file	
O Monthly	Browse	
	Handshake with MCS Forwarder 💡	
	Time Interval 10 Min	

After data collection inputs have been entered, click on Periodic Collection tab, as shown in the picture below:

Figure 182. Scheduler Configuration

Enable Periodic Data Collection check-box enables the scheduler. Following are the configurable options:

• **User Credentials:** To configure periodic data collection, an existing windows user account can be used or a new account must be created.

Following criteria must be met for the user account:

- a. The user account should have local administrator and log on as a service rights on this computer (MCS-DC launch computer). 'Log on as a service' privilege allows data collection services to start and run continuously, even if no users are logged on to the computer interactively.
- b. If the user is a domain user, enter the user name in the format **domain name\username**. If the system in work group, provide the credentials as **.\username**.
- c. If the system is 800xA, make sure that the user is part of Industrial IT user group. Besides, in the Aspect server also, the user shall be added as log on as service and the user should have local admin rights in the aspect server.

Click on Validate button, to validate the credentials.

- **Start Time:** Specify at what time the MCS Data Collection must start. Enter the start time in hours (0 23).
- **Period Options:** User can choose to run the scheduler Daily, Weekly or Monthly. If Weekly is selected, select the day of the week from the drop down menu. Select the start date, if Monthly is selected. Start Time is applicable for all three scheduler options.

MCS Forwarder Gateway Configuration: In order to send the collected data to target applications like CSM (Control System Monitoring) or MCS on-premise via MCS Forwarder, forwarder configuration needs to be done. A checkbox is provided to enable the Forwarder configuration. In the absence of an MCS-Forwarder node, this check box shall be disabled so that the collection files are saved in the output folder (local).



MCS Forwarder version must be 1.3 or newer. MCS Forwarder is available in ABB Library and My Control System.



Before entering MCS Forwarder Gateway Configuration, make sure that the MCS Forwarder node is configured and running.

Provide IP address of the Forwarder node and port number, if the .Net framework version in the MCS-DC launch node is 3.5 or above. If the.Net framework version is below 3.5, provide the destination folder path instead. These inputs are enabled automatically, based on the.Net framework version installed in the MCS-DC launch node.

If the.Net frameworks version of the MCS-DC launch node is below 3.5, follow the procedure below, to provide the destination (MCS Forwarder node) folder path:

- a. Folder on remote node (MCS Forwarder) must be set as shared.
- Map the remote folder in the MCS data collector launch node. It can be done either through command prompt or through windows UI. Command prompt method is given below.

Open command prompt in the MCS-DC launch node and type the following command.

net use <local drive name> <UNC path of remote node> /user:<UserName> <Password>

Refer to the below screen shot.



Figure 183. Map Network drive

c. The above step will create a network shared drive in the MCS-DC launch node. Now provide the complete UNC path of the remote folder as destination folder path.

IP Address	
Port	
Destination Fo	lder Path
\\169.227.40.8	31/150

Figure 184. Complete UNC path of the remote folder

For more details on MCS Forwarder, refer **7PAA001522_A_EN_MCS** Forwarder_User Manual. Provide IP address, Port and Destination Folder Path of the Forwarder node.

- Secured Communication: Enable secured communication if applicable. Refer appendix B for more details on secured communication configuration.
- Handshake with MCS Forwarder: Alive event signals will be sent to MCS Forwarder during the time interval mentioned in this field. This verifies the communication health between MCS-DC and MCS-FW. Default value is 10 minutes.
- **Check Communication Button:** This is to verify the communication status between MCS-DC and MCS-FW.

After configuring the scheduler parameters, Click next to go to scan page. See fig below.

ABB My Contr	rol System - Data Collector									
Configuration	Collection								S1075490-T	est © j
	Scan	Deploy Agents Sta	art Collection Service	Undeploy Agents	Stop Collection Service	Start Instant Collection	Customize	Cancel	Exit Periodic Collection	
Press 'Scan' button to start	scanning for node reachability									
Progress:										
Devices										
De	rvices	Device Typ	N	Scan SI	latus	Agent Status		Collection Status		Remarks
4										,
Log										E
Time					• Logs					×

Figure 185. Node Scan

4. Click scan button to initiate the control system node scan. Once the scan is completed, deploy button enables. See fig.

comparation Collection	can Deploy Agents Start Collection Service				SID75490-Test	0
anning is in progress. Please wait	ican Deploy Agents Start Collection Service					
nning is in progress. Please wait		Undeploy Agents Stop Collection Service	Start Instant Collection Customiz	e Cancel (?)	Exit Periodic Collection	
177010						
Q1955:						
a line						
Devices	Device Type	Scan Status	Agent Status	Collection Status		Rem
2019-CUENT	Computer	Buccese	- Anna Anna Anna Anna Anna Anna Anna Ann		IP5: 172.16.4.182	
2019ES	Computer	In Progress	Not Started	Not Started	IPs: 172.16.4.181	
9						
me		• 1	ogs			
124-02-14 21:07:30			Ranted Deployment Check for Node: 172.16.4.181			
24-02-14 21:07:30			Completed Deployment Check for Node: 172.16.4.182			
			Activate Windows			

Figure 186. Node scan in progress

wy Control System	Data Conector				-	9
Configuration	n				SID75490-Test	۲
	Scan Deploy Agents Start Collection Service	Undeploy Agents Stop Collection Service	Start Instant Collection	enzo Cancel	Exit Periodic Collection	
ck on 'Deploy Agents' button to start o	deploying the agents or click on "Customization" button to customiz	or the selection				
ogress:						
rvices						
Devices	Device Type	Scan Status	Agent Status	Collection Status		Rema
2019-CLIENT	Computer	Soccess		(interior)	IPs: 172.16.4.182	
2019ES	Computer	Success	Not Started	Not Started	IPs: 172.16.4.181	
2						
ne .		• u	201			
		5	can Compresed			
24-02-14 20:39:49						

Figure 187. Deploy Agents

5. Click Deploy Agent button to deploy data collection agents to all the nodes. Refer Section 5, Troubleshooting if agent deployment fails.

	- Data Collector					
Configuration	10				SI075490-Te	st ©
	Scan Deploy Agents Start Collection Service	Undeploy Agents Stop Collection Service	e Start Instant Collection Costs	mize Cancel	Ext Periodic Collection	
pent deployment is in progress. Please	wat					
rogress:						
levices						
Devices	Device Type	Scan Status	Agent Status	Collection Status		Remark
			Diploying			
L2019ES	Computer	Success	Not Starsed	Not Started	IPs: 172.16.4.181	
					1	
8						
9						
g			.001			
9 ime 124-02-14 20:42:38		• 1	ogs opplication Launch Type:WMI			

Figure 188. Agent deployment status

Start Collection Service: After deploying the data collection agents, Start Collection Service button enables. See Figure 189.

My Control System	- Data Collector					
Configuration O Collection					SID75490	Test 🛞
	Scan Deploy Agents Stat Collecton Serv	to Undeptoy Agents Stop Collection Service	Start Instant Collection Custo	imize Cancel 🧃	Exit Periodic Collection	
s on 'Start Collection' button to start o	collecting the data					
man.						
rices						
Devices	Device Type	Scan Status	Agent Status	Collection Status		Ren
019-CLIENT	Computer	Success	Deployed	in the f	IPs: 172.16.4.182	
019ES	Computer	Success	Deployed	Not Started	IPs: 172.16.4.181	
		• Leg	75			
4-02-14 20:44:07		De	ploy Completed			
		in:	MU-augh Type Will			
1-02-14 20:44:02						

Figure 189. Start collection service

a. Provide the periodic data collector user credentials and click OK.

G Services							-	×
File Action View	Help							
(+ +) 🖬 🗟 🖉	à 🔒 🛛 📷 🕨 🗰 🖬 🕨							
Services (Local)	O Services (Local)							
	ABB.MCSDataCollectorAgentSvc	Name	Description	Status	Startup Type	Log On As		
		ABB Tool Routing Service for AC 80	Tool Routin		Manual	Local System		
	Stop the service	ABB.MCSDataCollectorAgentSvc				61OPM\appeng		- 1
	recent the service	ABBCLSAnnoyanceNotityMgr	ABBCLSAnn	Running	Automatic	Local System		
		ActiveX Installer (AxInstSV)	Provides Us		Manual	Local System		
		Adobe Acrobat Update Service	Adobe Acro	Running	Automatic	Local System		

Figure 190. Log on as service

Deploying the collection agents will create agent service (MCS.ABBDataCollectorAgentSvc) in all the nodes earmarked for data collection, as windows service. See fig.

Click start collection service button to start the collection service.

File Action View	Help							
Services (Local)	Services (Local)							
	Select an item to view its description.	Name	Description	Status	Startup Type	Log On As		
	CONTRO CONTROLOGICO DE CONT	ABB 800xA Node Administration Service	Service that	Running	Automatic	6110PM/800xAService		
		ABB 800xA Notification Service	Service to s	Punning	Automatic	6110PM//S00xAService		
		ABB 800xA System Installer Agent	System BODy	Running	Automatic (D	6110PM-500xAService		
		ABB 800xA System Installer File Transfer	System 800x		Manual	6110PM/800xAService		
		ABB Application logger		Pynning	Automatic	6110PM.800xAService		
		ABB Client License Provider		Running	Automatic	6110PM/.800xAService		
		ABB MMS Server for AC 800M	MMS Com		Manual	6110PM/800xAService		
		ABB RNRP Service	Redundant	Running	Automatic	Local System		
		CABB Tool Routing Service for AC 800M	Tool Routin		Manual	6110PM/800xAService		
		ABB MCSDataCollectorAgentSvc		Running	Automatic	Local System		
		ABB MCSDataCellectorSvc		Running	Automatic	6110PMR.\$00xainstaller		
-		23 ABBCI SAnpowarceNotifyMor	ABBCLSApp	Running	Automatic	Local System		

Figure 191. Agent Service

Agent services will start and periodically check with scheduler, if data collection is scheduled. The data collection starts based on the time set in the scheduler configuration.

Stop Collection Service: This button will become active once the collection starts. Collection can be stopped at any point in time by clicking this button. Upon clicking Stop Collection, data collector service in the launch node

Configuration Collection		
3	Scan Deploy Agents Start Collection Ser	vice Undeploy Agents Stop Collection Service
ick on 'Start Collection' button to start colle	cting the data	
ogress:		
ogress:		
levices		
ogress: levices Devices	Device Type	Scan Status
evices Devices	Device Type Computer	Scan Status Success
Devices Devices L2019-CLIENT L2019ES	Device Type Computer Computer	Scan Status Success Success
evices Devices L2019-CLIENT L2019ES	Device Type Computer Computer	Scan Status Success Success
Devices Devices 1/2019-CLIENT 1/2019ES	Device Type Computer Computer	Scan Status Success Success

(ABB.MCSDataCollectorsvc) will be stopped and therefor the collection.

Figure 192. Stop collection service

Periodic collection needs to be stopped if the scheduler parameters need to be modified.

Undeploy Agents: If any configuration changes need to be made in periodic collection, agents are to be **Undeployed** from all the nodes. The undeploy button will stop the agent service in all the nodes and perform necessary cleanup of files, folders and services created as part of periodic collection execution.Before exiting the tool, agents are to be undeployed.

- 6	

After the agents are removed, user can reconfigure the periodic collection without closing the data collector.

Exit Periodic Collection: To exit from periodic collection, click on **Exit Periodic Collection** button. This button will be enabled after undeploying the agents.

At any point in time during collection, MCS-DC can be closed. When the tool is re-opened, it will show the collection progress.

Start/Stop Instant Collection: Using this button, users can override the scheduled time for data collection and start a collection immediately. In order to stop instant collection, click on the Stop Instant Collection button.

ABB My Contro	I System - Data Collector					÷	o ×
Configuration	Collection					SID75490-Test	© i
	Scan Deploy Agents	Start Collection Service Undeploy Ager	Stop Collection Service	Start Instant Collection	Customize Cancel	2 Exit Periodic Collection	
Next scheduled collection tim	e : 2/14/2024 11:00:00 PM						
Progress:							
Devices							
Devi	ices De	vice Type So	an Status	Agent Status	Collection Status		Remarks
FL2019-CUENT	Computer	1	costs -	Rimmerg		IPs 172.16.4.182	
FL2019E5	Computer	5	ICCRES	Running	Not Started	IPs: 172.16.4.181	
1							
rog							60
Time 2024-02-14 20-48-16			- Log	IS			
2024-02-14 20:44:07			De	Noy Completed			
2024-02-14 20:44:02			Ap	lication Launch Type:WMI			-1
							•

Figure 193. Start Instant Collection

3.6 ESXi Data Collection

In this chapter there is a detailed explanation about how to collect ESXi host server health data with MCS-DC. ESXi data collection is supported in both Basic and Advanced mode. Following are the input configuration for collecting ESXi performance data.



At least one HMI performance and/or life cycle must be selected to enable ESXi data collection.

onfiguration	tem - Data Collector					
nput						
reelance Prerequisit	es Check Periodic	Collection ESXi				
Enable ESXi Data Colle ESXi Inputs	ction					
ESXi Server Name						
ESXi server IP						
Port Number	443					
User Name						
Password						
Computer IP to reac ESXi server	n					
			Add			
ESXi Server Name	ESXi server IP	Port Number	User Name	Password	Compute	
•	1					

Figure 194. ESXi Data Collection - Input Configuration

Enable ESXi data collection: Check this for enabling ESXi data collection.

ESXi Server Name: The name of the ESXi server that must be collected. To obtain the ESXi server name, log in to the ESXi server by using vSphere web client and click on Host under Navigator. Note that ESXi server name input is case sensitive, so provide the name as appearing in the web portal. Refer to the image below.

← → C ▲ Not secure	10.50.12.40:64441/ui/#/host	
Apps 🖊 My Control System	📕 Log in - VMware ESXi	
vmware' ESXi"		
📲 Navigator 🖂	ESX11	
Itost Manage Monitor Image Monitor Image Image <th>Get vCenter Server) *</th> <th>Create/Ragister VM 🔁 Shut down 💽 Reboot C Refresh 🏠 Actions 7.0 Update 3 Normal (not connected to any vCenter Server) 174.92 days</th>	Get vCenter Server) *	Create/Ragister VM 🔁 Shut down 💽 Reboot C Refresh 🏠 Actions 7.0 Update 3 Normal (not connected to any vCenter Server) 174.92 days
FritzBox	The ESXi shell is enable SSH is enabled on this	oled on this host. You should disable the shell unless it is necessary for administrative purposes. 🏠 Actions shost. You should disable SSH unless it is necessary for administrative purposes. 🏠 Actions
🕴 🛤 vmk0	* Hardware	
Mill vmnic1	Manufacturer	Hewlett-Packard
► Q FritzBox	Model	HP Z840 Workstation
More networks	F 🔲 CPU	8 CPUs x Intel(R) Xeon(R) CPU E5-2620 v4 @ 2.10GHz
	Memory	31.92 GB
	Virtual flash	0 B used, 0 B capacity
	✓ Q Networking	

Figure 195. ESXi Server Name

ESXi Server IP: The IP Address of the ESXi Server that must be collected; make sure that the selected IP can be reached from at least one of the computers part of the system.
Port Number: The default port number is 443. Do not change this, unless the ESXi server has been configured to communicate though a different port number.

	Q localhost.CR1.ABB.COM - Networking	1					
Host	Port groups Virtual switches	Physical NICs VMkemel NICs	TCP/IP stacks Firewall rules				
Manitar	🥖 Edit settings 🤁 Refresh 🕴 🔅	Actions					Q Search
Virtual Machines	Name .	< Key	 Incoming Ports 	 Outgoing Parts 	~ Protocols	 Service 	~ Daemon
A Freelance	VM serial port connected to vSPC	VSPC		0	TCP	N/A	None
Monitor	vMotion	vViction	8000	8000	TCP	NA	None
800xa Sec domain Asp	VMware vCenter Apent	voi Heartbeats		902	UDP	VDCA	Stopped
Monitor	vSAN Clustering Service	controls	12321 12345 23451	12321, 12345, 23451	UDP	NA	None
More VMs	vSAN Transport	rdt.	2233	2230	TCP	N/A	None
lorage	vesnEncrypton	vianEncryption		0	TCP	NA	None
etworking	2 vsameath-unicastlest	vsanhealth-unicastlest	5201	5201	UDP. TCP	NA	None
VM Network	vSphere Web Access	webAccess	80		TCP	NA	None
Monitor	vSphere Web Client	vSphereClient	443, 902		TCP	NA	None
s vmnic2	wold	wold		0	TCP	NA	None
plant	MAN .	uunu		0	lino	BLOD.	klana
plant							43
	Key Enabled Allowed IP Addresses	vSphereClient Ves All	₽.				
	Key Baabud Ablued IP Addresses	vSphereClient Yes Al	D				
	Kr Except Above IP Addresses	väpten:Clent Ten Ad	¢				
	Kry Encoder Advised IP Addresses	väphendliset Va As	 Initator 	v Guord	✓ Started	✓ Renit ▲	∼ Completed •
	Kry Encode Above IP Adoreses Taking Taking Manaray M	diamedian Va Al Vitaget	~ interv a ree	 Overend ob 12 019 25 8 21 	 ✓ Starlad 281/2010 454521 	✓ Result ■ Compared nonesoldy	✓ Completel ■ en spore es e sa
	Kry Encode Above IP Adoreses Tatik Resert tasks Tatik Resert Juli Recort Dati	AdvenceCleat ve Al Target © Target © Targ	v Interv a me a e	 Consent op 2009 05 54 21 09 22019 05 55 16 	 ✓ Starled Øn 12014 08 8421 Øn 12014 08 8421 	> Recal ↓ © Corpute Assessby © Corpute Assessby	 Completed • descape+ des 42 descape+ des 42

Figure 196. ESXi Access - Incoming Port

User credentials: The credentials needed to access the ESXi server in read-only mode. Note that, the username and password are case sensitive. The scan will fail if the user access permission is higher than read-only.

Computer IP to reach ESXi server: The IP Address of the computer which has access to the ESXi sever. The ESXi data collection agent will be deployed in this computer, therefore it is mandatory that this computer is part of the system and is part of data collection. Please be aware that, if this computer is not reachable from the computer where MSC-DC is being executed, ESXi data collection can't be done. Add the IP Address of the computer, and then select the Add button. It is possible to add more than one ESXi server, one at a time. If an ESXi server has been added by mistake, it can be removed selecting it and then selecting the Remove button. Ensure that this computer is not removed from the collection by means of node customization on the collection screen.

Care must be taken for not using this computer as the reachable node for more than one ESXi server.



If the service SFCB (Small Footprint CIM Broker) is not running in the ESXi server, certain sensor data like processor temperature and fan speed, will not be collected.

4 Post Collection Procedure

Collection file name is structured in this way:

SID_RecDate_RecTime_HMISystemName_[ControllerSystemName]_DataCat _Mode_[Part].zip

- SID: SID of System
- RecDate: Recording Date [YYYYMMDD]
- RecTime: Recording Time [HHMM]
- HMISystemNames: Refer Figure 191
- ControllerSystemNames: Refer Figure 191
- DataCat:
 - L- Life cycle
 - P- Performance
 - S- Software
 - C- Cyber Security
- Mode:
 - A-Advanced mode
 - B-Basic mode
 - P-Periodic collection mode
 - M-System file merging
 - Part Denotes partial collection, as a result of node customization.

4.1 Collection file merging

For certain system families, it is not possible to collect data in single step. For example, 800xA with Harmony controller system (Refer to Section 3.4.1, Data Collection Process). Harmony data which is collected from Harmony engineering node need not be an 800xA node, and to collect 800xA data, the MCS-DC should be launched in an 800xA node. In this case a two step collection followed by data file merging is needed to generate a single collection file and therefore a single set of reports.

Section 3.4.8, Data Collection Process describes other examples where a single step data collection is not possible.

To merge two system data files follow the steps described below.

1. Double-click on the MCS-DC_Launcher.exe, to launch the tool. It is present inside the unzipped MCS-DC folder. Select the option Merging of data files and click the launch button.

A	BB	My	Contro	System - Data Collector				×
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				MCS-D	C			е
					8			
				.Net version check	0			
				User privilege check	0			
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				MCS-DC launch drive check	0			
				New collection Merging	of data files			
				Close Ø	unch ->			<u>1</u>
								0
								ал. С
								-

Figure 197. Merging of Data Files

2. Provide the input data files by clicking respective browse buttons. Provide the decryption keys in the respective field. This is the encryption

password provided as input during the respective collections. Click Continue.

MCS-DC (S	rstem data file merging)		
Merge Wizard			
System Data File Input ?			
Master data file			
C:/Penchal/MCS-DC/Marg	eWerG2ISID35104_20230302_1620_800xA_PLSC_Azip	Browse	
Decryption password			
********	۲		
Merging data file			
C:IPenchal/MCS-DC/Marg	eWerG2ISID35104_20230302_1819_HarmonyRack_PL_A.zip	Browse	
Decryption password			
*****	۲		
		_	
			Contin

Figure 198. System Data File input

- 3. Select the systems\nodes to be merged from both the System data files. Ensure the following:
 - a. Minimum version of .Net framework installed in the PC where MCS-DC is executed must be 4.7.2.
 - b. Both system data files must belong to the same System ID.
 - c. Both system data files must have been collected with the same MCS-DC version.
 - d. The time gap between these two data collections must not exceed 90 days.
 - e. Minimum one system must be selected from each system data file for merging.
 - f. Same data file cannot be used twice as input files for merging.

- g. Do not select more than one HMI system (800xA, Freelance or S+ operations).
- h. If HMI system is part of one or both of system data files, selecting it from one of the files is mandatory.



It is important to note that when merging an 800xA system data file with S+ Historian data file, the master file must be the 800xA file. When merging a non-ABB system data file with S+ Historian data file, the the non-ABB system data file must be selected as the master file and the S+ Historian data file must be the merging file.



In case of node level merging, collection files system version and collection types must be same.



It is strongly recommended that the data files collected using MCS-DC 2.3 or earlier versions, shall not be used for merging.



Figure 199. Validation

- 4. The failed nodes will appear in red and succeeded in green. Select the systems\nodes that are to be merged. After selecting required systems from both system data files, perform data validation by clicking on 'Validate' button. Refer to the log window for validation errors, if any. Clicking on 'Back' button will bring back the 'System Data File input' screen. Clicking on 'Continue' button will bring the 'Merging' screen, if data validation is successful.
- 5. Enter the full name of the user, as it will be shown in My Control System after the merged system data file has been uploaded. Enter an Encryption password with a length of 8 to 16 characters. Any combination of lower

Merger Ward Merger Variad Merger dystem dat file path: Cutsers/BECYNAEDoctoneABBC Destage/BULLD Collection/BLCDDC2 B/2 B/2211 29606_mole Merging stary disseMCCE Remer Set Table Merger Set Table Set Table Corpsion payment data file path: Cutsers/BECYNAEDoctoneABBC Destage/BULLD Collection/BLCDDC2 B/2 B/2211 29606_mole Merging stary disseMCCE Set Table Corpsion payment data file path: Cutsers/BECYNAEDoctoneABBC Destage/BULLD Collection/BLCDDC2 B/2 B/2211 29606_mole Merging stary disseMCCE Set Table Corpsion payment data file path: Cutsers/BECYNAEDoctoneABBC Destage/Bull.DD Collection/BLCDDC2 B/2 B/2 B/2211 29606_mole Merging stary disseMCCE Set Table Corpsion payment data file path: Cutsers/BECYNAEDoctoneBBC Destage/Bull.DD Collection/BLCDDC2 B/2 B/2 B/2211 29606_mole Merging stary disseMCCE		mos-bo (system data	ine merging)							
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Merged by:										
Test Encryption password Image Merged system data file path: CVLSessW2697A8ConcDrive-ABDDestsgeBULLD CollectionsUSDCC2.91/8.002DC23.2.3.02311.29906f_anois Merging atomy closesULCIX CVLSessW2697A9ConcDrive-ABDDestsgeBULLD CollectionsUSDCC2.91/8.002DC23.2.3.02311.29906f_anois Merging atomy closesULCIX CVLSessW2697A9ConcDrive-ABDDestsgeBULLD CollectionsUSDCC2.91/8.002DC23.2.3.02311.29906f_anois Merging atomy closesULCIX CVLSessW2697A9ConcDrive-ABDDestsgeBULLD CollectionsUSDCC2.91/8.002DC23.2.3.02311.29906f_anois Merging atomy closesULCIX		Merged by								
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case, upper case, numeric and special characters is allowed. This password is used to encrypt the merged data.

Figure 200. Merging Screen

6. Clicking on 'Merge' button will initiate the merging operation. Detailed logs will be shown on the log window. After successful completion, merged system data file will be created and the file path will be displayed. Click the button against the link, to find the merged data file.

Clicking on back button after successful merging operation, will bring the 'System data file input' screen and after failed merging operation, will bring the 'System selection' screen.

Click on Exit button to exit the application.



Merging functionality is not restricted to any system data file combinations. However, In order to maintain the accuracy and validity of the merged data file, users are expected to have proper understanding on valid system combinations.

4.2 Limitations in data file merging.

Following are the restrictions in data file merging.

- 1. Merging is not supported for Melody system collections.
- 2. System level merging is supported for QCS system. (for e.g 800xA system with QCS). However, QCS controller node level merging is not supported.
- 3. Additional nodes data which is collected as part of 800xA and Freelance system can only be merged for collections taken using MCS-DC 2.9 or above versions.

4.3 Report Generation from MyABB and uploading data file to ServIS.

Collection file must be uploaded to myABB / My Conrtol System to generate reports. To upload the collected data to ServIS, use SCX IBM version 1.20 or higher. Note that the upload of data to ServIS is restricted to specific ABB employees.

4 Post Collection Procedure Report Generation from MyABB and uploading data file to ServIS.

5 Troubleshooting

5.1 Issue 1: Node scan failed

If node scan failed, it may be due to inadequate user rights to access the remote node. To verify the access rights, do a simple file copy to the remote node from the launch node. Access the path \\<IP address of the remote node>\C\$\Windows\Temp from launch node and copy a small file. If the copy operation fails, user may not have sufficient rights to access the remote node. In workgroup systems, if the credential format .\username does not work, use computer name\ Username format to enter the credentials.

5.2 Issue 2: Agent deployment failed

In very rare occasions during periodic data collection, data collector agent deployment may fail. In this case, stop and delete the windows service ABB.MCSDataCollectorAgentSvc in remote nodes and deploy the agent from the launch node again. To delete the service, open windows command prompt with administrative privileges and run the command below -

 $sc \ delete \ \ ABB.MCSDataCollectorAgentSvc$

Manual Administrator: Command Prompt

C:\Windows\system32>sc delete ABB.MCSDataCollectorAgentSvc [SC] DeleteService SUCCESS

Figure 201. Delete service

5.3 Issue 3: Error message when .Net Framework is missing in the launch node

A certain, minimum .NET Framework version must be installed in the nodes as part of data collection. Refer to prerequisites section for more details. If MCS-DC is launched from a node where no .NET Framework is installed, or there is a version that is too old, an error message will pop-up, as shown in the picture below.



Figure 202. Error Message



For a complete list of .NET Framework versions compatible with each Operating System please consult your local IT department.

5.4 Issue 4: Windows Firewall Settings for WMI

MCS-DC uses WMI API's to collect the data from configured nodes (local / remote) in the control system network. If WMI is not enabled in the firewall, MCS-DC will not able to access the remote node and collect the data.

In case of WMI access denied error or failed to connect remote nodes error, check whether WMI traffic is blocked by the firewall. If the traffic is blocked, WMI needs to be enabled in the firewall. In this section there is an explanation of how to check, enable and disable WMI traffic in the Firewall.

The below procedure is applicable for Windows Server 2016 Operating System, and may vary slightly for other Operating Systems. Enabling WMI is mandatory for all nodes from which the data is collected. This setting can be reverted once the data collection is complete.



1. In the Control Panel, click on Windows Firewall.

Figure 203. Control Panel

2. Windows Firewall screen appears, click on Advanced Settings.



Figure 204. Advanced Settings

 Windows Firewall with Advanced Security screen appears. Select Inbound Rules option and check if Windows Management Instrumentation (WMI-In) rule is enabled. If the rule is enabled, WMI traffic is allowed by the Windows firewall, hence no further changes are required.



Figure 205. Windows Firewall with Advanced Security Screen

4. In case, if rule is configured and not enabled in the inbound rules. Right click on the **Windows Management Instrumentation (WMI-In)** and select **Enable Rule**.

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Windows Firewall with Advance Windows Firewall with Advance Source of the second Rules Outoound Rules Connection Security Rules Monitoring	Inbound Rules Name ✓ World Wide Web Services (HTTPS Traffic-In) SNMP Trap Service (UDP In) Software Load Balancer Multiplexer (TCP-In) TPM Virtual Smart Card Management (DCOM-In) TPM Virtual Smart Card Management (TCP-In) TPM Virtual Smart Card Management (TCP-In) Virtual Machine Monitoring (DCOM-In) Virtual Machine Monitoring (DCOM-In)	Group Secure World Wide Web Ser. SNMP Trap Software Load Balancer TPM Virtual Smart Card Ma. TPM Virtual Smart Card Ma. TPM Virtual Smart Card Ma. TPM Virtual Smart Card Ma. Virtual Machine Monitoring	Profile ^ All Private Domain All Private Domain Private All Private All All All All All All All All All All	Actions Inbound Rules Image: New Rule Image: There by Profile Image: There by State Image: There by Group View Image: Refresh Image: Export List
	Virtual Machine Monitoring (Echo Request - ICMPV Virtual Machine Monitoring (Echo Request - ICMPV Virtual Machine Monitoring (IB-Session-In) Virtual Machine Monitoring (IB-C) Windows: Firewall Remote Management (RPC) Windows Firewall Remote Management (RPC) Windows Management Instrumentation (ASync-In) Windows Management Instrumentation (COM-In) Windows Media Player (UDP-In) Windows Media Player (UDP-In) Windows Remote Management (HTTP-In) Windows Remote Management (HTTP-In) Windows Remote Management (HTTP-In)	Virtual Machine Monitoring Virtual Machine Monitoring Virtual Machine Monitoring Virtual Machine Monitoring Windows Firewall Remote Windows Mand Enable Windows Mand Cut Windows Mand Cut Windows Medi Copy Windows Medi Delete Windows Rem Proper Windows Rem Proper	All All All All All All All Rule	Heip Windows Management Instrumentation (WM Disable Rule Cut Cut Copy Dete Properties Help Help
· · · · · · · · · · · · · · · · · · ·	Work or school account Work or school account Work or school account Work or school account World Wide Web Services (HTTP Traffic-In) Vour account Vour account Vour account Vour account	Windows Reine Help Work or school account Work or school account Work or school account World Wide Web Services (Your account Your account Your account	Domai Domai All Domai Domai Domai	

Figure 206. Enable Rule

5. In case, if rule is not configured, right click on the **Inbound Rules** and select **New Rule**.

Madaus Eisen	Hardh Advanced Int	1 D 1				
Inbound Put	der	ound Kules	· ·		Actions	
Outboun	New Rule	The second se	Group	Profile	Inbound Kules	
Connecti	Filter by Profile	storyConnectivity EventCollector		All	New Rule	
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	Filter by State	storyConnectivity SyncService		All	T Filter by State	
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	0	Aspect Directory service firewall configuration	en S	All	K Cut	
	0	Backup service firewall configuration		All	Ph. Com	
	0	Basic History service firewall configuration		All	сору	
	0	Batch Mirroring Port		All	X Delete	
	0	Batch Net Router Port		All	Properties	
	0	Batch SQL Firewall Ex		All	Help	
	0	Batch SQL Server Port		All		
	0	Calculations Service		All		
	0	Configuration Wizard		All		
		Cross Referencing service firewall configurat	ion	All		
		DMFF DMS 01		All		
		DARE DAS 02		All		
		DIAGE EEDSD 01		All		
		DIMEE EEDSD 02		All		
		DMEE FEDSD 03		All		
	0	DMEE FEDSD 04		40		
	o	DMFF FFDSD 05		All		
	0	DMFF FFDSD 06		All	~	
	2 4					

Figure 207. New Rule

 New Inbound Rule Wizard appears. In the New Inbound Rule Wizard, select Predefined option and select the Windows Management Instrumentation (WMI-In) rule and then click on Next.



Figure 208. Predefined Option

		Actions
Wew inbound Rule wizard		Inbound Rules
Predefined Rules		New Rule
Select the rules to be created for th	is experience.	V Filter by Profile
Steps:		√ Filter by State
a Rule Type	Which rules would you like to create?	Y Filter by Group
Predefined Rules	The following rules define network connectivity requirements for the selected predefined group.	View
 Action 	Fules that are checked will be created. If a rule already exists and is checked, the contents of the existing rule will be overwritten.	G Refresh
		Boport List
	Rules:	Help
	Name	Application Log Service
	Windows Management Instrumentation (Async-In)	Disable Rule
	Windows Management Instrumentation (DCOM-In)	🔏 Cut
		Сору
		🔀 Delete
		Properties
		P Help
	c >	11-12-11 E
	< Back Next > Cancel	
U KA D	MFF FFDSD 03	

7. Select all the three rules in the Rules section and click on **Next**.

Figure 209. Select All Rules

nd				Actions	
In Www.Inbound.Kule.Wizard			×	Inbound Rules	
Action				🙇 New Rule	
M Specify the action to be taken wh	en a connection matches the conditions specified in the rule.			Filter by Profile	
Steps:				Y Filter by State	
Rule Type Red Rules	What action should be taken when a connection match	es the specified conditions?		V Filter by Group	
Predefined Rules				View	
a Action	(e) Allow the connection This includes connections that are protected with IP	sec as well as those are not		G Refresh	
			_	🔒 Export List	
	This includes only connections that have been auth	enticated by using IPsec. Conn	ections	Help	
	will be secured using the settings in IPsec properties Rule node.	and rules in the Connection Se	cunty	Application Log Service	
	Custower			Disable Rule	
				🔏 Cut	
	O Block the connection			Copy	
				X Delete	
				Properties	
				Help	
		Back Finish	Cancel		
0	DMFF FFDSD 03		All		
	DMFF FFDSD 04		All		

8. Select Allow the connection and click on Finish.

Figure 210. Allow the Connection

9. After the collection of complete data, revert the changes. Select the options and click on **Disable Rule**.

Windows Firewall with Advance	Inbound Rules			Actions
Cutbound Rules	Name	Group	Profile ^	Inbound Rules
Conceton Security Rules	Whold Wide Web Services (HTTPS Traffic-In) SNMP Trap Service (UDP In) SNMP Trap Service (UDP In) Software Load Balancer Multiplexer (TCP-In) TPM Virtual Smart Card Management (DCOM-In) TPM Virtual Smart Card Management (TCP-In) TPM Virtual Smart Card Management (TCP-In) Virtual Machine Monitoring (Echo Request - ICMP Virtual Machine Monitoring (Echo Request - ICMP Virtual Machine Monitoring (ISC) Session-In) Virtual Machine Monitoring (ISC) Virtual Machine M	Secure World Wide Web Ser SNMP Trap SNMP Trap Software Load Balancer TPM Virtual Smart Card Ma TPM Virtual Smart Card Ma TPM Virtual Smart Card Ma Virtual Machine Monitoring Virtual Machine Monitoring Vindows Firewall Remote Vindows Firewall Remote	All Private Domain All Private Domain Domain Private All All All All All All Disable Rufe	New Rule Ver Rule Ver Rule by Profile View Filter by State View Refresh beport List Help Selected Items Copy Cut Copy Dejete
	Windows Media Player (UD-In) Windows Media Player (UD-In) Windows Media Player (UD-In) Windows Remote Management (HTTP-In) Windows Remote Management (HTTP-In) Windows Remote Management (HTTP-In) Windows Remote Management Windows Remote Remote Amagement Windows Remote Remote Remote Management Windows Remote Remote Remote Remote Management Windows Remote Rem	Windows Media Player Windows Media Player Windows Remote Manage. Windows Remote Manage. Work or school account Work or school account Your account Your account Your account Your account	Cut Copy Delete Help Domai Domai Domai Domai Domai	

Figure 211. Disable the Rule

5.5 Issue 5: Enabling Windows Administrator Share Access for Freelance Data Collection.

- 1. Login to the nodes in which Administrative Share has to enabled and open services window (type services.msc in the windows run command and click enter to open service window)
- 2. Under the list of services, identify the service name **Server**. The remote collection of process HMI fails when this service is disabled
- 3. Double-click the server service to open the Server Properties
- 4. Set the startup type to Automatic
- 5. Click on Apply and then click on Start to bring the service to run state
- 6. The status of the Server service changes to Started

5.6 Issue 6: Disabling User Account Control

This applies only to Freelance 2016 SP1 or higher in Windows 10. In order to disable the UAC completely create a new registry key LocalAccountTokenFilterPolicy under the path

HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows\CurrentVersio n\Policies\system\LocalAccountTokenFilterPolicy and provide the value as 1. Follow the Steps to create the register key.

1. Open the registry editor and go to the following path HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows\CurrentVersi on\Policies\system\

	- FileHistory	^ Name	Type	Data	
	FlightedFeatures	ab) (Default)	REG SZ	(value not set)	
>	GameInput	ConceptPromotRehaviorAdmin	REG DWORD	0-00000005 (5)	
	GameInstaller	ConsetPromptDefinition	REG DWORD	0-0000003 (3)	
	GameUX	Consent Promptbenavioroser	REG_DWORD	0.00000003 (5)	
	Group Policy	and dontdisplaylastusemame	REG_DWORD	0x0000000 (0)	
	Hardwareldentification	DSCAutomationHostEnabled	REG_DWORD	0x0000002 (2)	
	HelpAndSupport	EnableCursorSuppression	REG_DWORD	0x00000001 (1)	
	- Hints	EnableInstallerDetection	REG_DWORD	0x00000001 (1)	
5	HomeGroup	H EnableLUA	REG_DWORD	0x00000001 (1)	
5	- IME	HenableSecureUIAPaths	REG_DWORD	0x00000001 (1)	
	- ImmersiveShell	EnableUIADesktopToggle	REG_DWORD	0x00000000 (0)	
	InstallAgent	# EnableVirtualization	REG_DWORD	0x00000001 (1)	
- i i i i	Installer	and legalnoticecaption	REG_SZ		
i i i	Internet Settings	ab legalnoticetext	REG_SZ		
	LanguageComponentsinstaller	PromptOnSecureDesktop	REG DWORD	0x00000001 (1)	
Ś	Live	19 scforceoption	REG DWORD	0x00000000 (0)	
	Lock Screen	12 shutdownwithoutlogon	REG DWORD	0+00000001 (1)	
3	- Management Infrastructure	20 understruitheutleese	REG DWORD	0-0000001 (1)	
Ś	Media Center	20 Validate 1 dmin Code Size at user	PEG DWORD	0-0000000 (7)	
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3	NcdAutoSetup				
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	NetworkServiceTriggers				
ŝ	Notifications				
	OEMInformation				
	OneDriveRamps				
	OOBE				
	OpenWith				
	OptimalLayout				
	Parental Controls				
	Personalization				
	PhotoPropertyHandler				
	Policies				
	ActiveDesktop				
	Attachments				
	DataCollection				
	Explorer				
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	a construction of				

Computer\HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows\CurrentVersion\Policies\System

Figure 212. Registry editor

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************************************		×	> - PowerE Precisic Preview Propert V					

2. Right-click and create new registry key.

Computer\HKEY LOCAL MACHINE\SOFTWARE\Microsoft\Windows\CurrentVersion\Policies\System

Figure 213. Create New registry Key

1	1 di cine	Interne A	News	T	Dete		-
		Interne A Langua Live Lock Sc Manag MdDe NedAur NetCac NetWor Notifici OEMIni OneDri OneDri OneDri Parentz Parentz PhotoP Policiet Act	Name (Default) ConsentPromptBehaviorAdmin ConsentPromptBehaviorUser dontdisplaylastusername DSCAutomationHostEnabled EnableCursorSuppression EnableInstallerDetection EnableSecureUIAPaths EnableSecureUIAPaths EnableSecureUIAPaths EnableSecureUIAPaths EnableSecureUIAPaths EnableSecureUIAPaths EnableSecureUIAPaths Secoreception Secoreception SecoreCoption John Schwithoutlogon ValidateAdminCodeSignatures	Type REG_SZ REG_DWORD REG_SZ REG_DWORD REG_DWORD REG_DWORD REG_DWORD REG_DWORD REG_DWORD REG_DWORD REG_DWORD	Data (value not set) 0x0000003 (5) 0x00000003 (3) 0x0000000 (0) 0x00000001 (1) 0x00000001 (1) 0x00000001 (1) 0x000000001 (1) 0x000000001 (1) 0x000000001 (1) 0x000000001 (1) 0x000000001 (1) 0x000000001 (1) 0x000000001 (1) 0x000000001 (1)		
		Atta Dat Exp Nor Syst PowerE Precisic Preview Propert V	New >	Key String Value Binary Value DWORD (32-bit QWORD (64-bit Multi-String Va Expandable Stri	1) Value 2) Value lue ing Value		

3. Select DWORD (32bit) Value.

Computer\HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows\CurrentVersion\Policies\System

Figure 214. Select DWORD value

>-	Interne \land	Name	Type	Data		
	Langua	ab (Default)	REG SZ	(value not set)		
>-	Live	10 ConsentPromptBehaviorAdmin	REG DWORD	0x00000005 (5)		
>-	Lock Sc	ConsentPromptBehaviorUser	REG DWORD	0x0000003 (3)		
>-	Manag	118 dontdisplaylastusername	REG DWORD	0x00000000 (0)		
>-	Media I	110 DSC Automation Host Enabled	REG DWORD	0x00000002 (2)		
>-	MMDe	Enable Cursor Suppression	REG DWORD	0x00000001 (1)		
>-	NcdAu	200 EnableInstallerDetection	REG DWORD	0x00000001 (1)		
>-	NetCac	State Chapter State Concernant	REG DWORD	0-00000001 (1)		
2-	Networ	Sill EnableSecurel IIADaths	REG_DWORD	0-0000001 (1)		
>-	Notific	Enables IIA Decitor Toggle	REG_DWORD	0-0000000 (0)		
	OEMIN	20 EnableVidualization	REG_DWORD	0-00000001 (1)		
	OOPE	ablegalecticscaption	REG_DWORD	010000001(1)		
	ODDE	ablessestisted	REG_SZ			
	Ontima	eganoticetext	REG_3Z	0.00000001 (1)		
	Parenta	no PromptOnSecureDesktop	REG_DWORD	0x0000001(1)		
	Person:	no scrorceoption	REG_DWORD	0x0000000 (0)		
5-	PhotoP	es snutdownwithoutiogon	REG_DWORD	0x0000001(1)		
÷.	Policies	undockwithoutlogon	REG_DWORD	0x0000001(1)		
I I I	Act	ValidateAdminCodeSignatures	REG_DWORD	0x0000000 (0)	 	
	Atta	LocalAccountTokenFilterPolicy	REG_DWORD	0x00000000 (0)	 	J
	Dat					
	Exp					
	Nor					
~	Syst					
	>					
	PowerE					
>-	Precisic					
	Preview					
3-	Propert v					

4. Rename the created registry key to LocalAccountTokenFilterPolicy.

Computer\HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows\CurrentVersion\Policies\System

Figure 215. Rename the created registry key



5. Double-click the newly created registry key to edit and provide the value as "1". And Click OK.

Figure 216. Edit registry key



The above mentioned account setting has to be done in all the nodes par of data collection, with the exception of the node where the MCS-DC is launched.



Disabling of UAC permanently is not recommended from Windows 10 onwards. Hence it is mandatory to delete the added registry keys after data collection is completed and MCS-DC is closed.

6 Additional Information

6.1 Listing of related documents

Document Kind	Title Document No
My Control System (on- premise) – Installation and Configuration Manual	2PAA121208
My Control System – Forwarder – User Manual	7PAA001522
My Control System (on- premise) – Hardening Guide	7PAA002031
Digital Service Products Lifecycle Plan	7PAA005206

Table 2.

Appendix A How to change the default port number

MCS-DC uses port number 23571 as default. Should you need to use a different port, follow the instructions provided here. If MCS-DC detects that the port that is chosen is already in use, a notification is shown, asking to change the port number.

A.1 Basic Mode

1. In the Configuration screen click on the **settings** icon as highlighted in the below figure.



Figure 217. Click On Settings Icon

2. As the settings screen appears, provide a new port number in the **Port Number** field.

ABB My Contro	I System - Data Collector	-	.0	>
Collection for	Y Configuration Waard	SID12345-Test	0	9
	Detected Systems 🥝			
	ABB Settings ×			
	HMI : 6004A General Communication			
	Controllers AC 800M, AC 70, 11 System Version 6.1.0.0 (Apert Communication)			
	Apply Cancel			
		Ca	otrue	i.

Figure 218. Provide New Port Number

3. Click on **Apply** to save the changes.

A.2 Advanced Mode

1. In the Configuration screen click on the **settings** icon as highlighted in the below figure.

Configuration								SID12345 Test	0	
IMI 🕜					Controllers (2)					
	Performance	Lifecycle	Software	Security		Performance	Lifecycle			
Ax000	10				AC 800M					
reelance					AC 70, 110, 160					
Operations					Freetance					
					AC 410, 450, MP, SG 400					
					Melody Rack					
					Mod300					
					QCS					
								_		

Figure 219. Click on Settings Icon

2. Settings screen appears, provide a new port number in the **Port Number** field.

Configuration								SID12345-Test	0	
MI 🕢					Controllers 👩					
	Performance	Lifecycle	Software	Security		Performance	Lifecycle			
10xA				ABB Settings		×				
reelance				General Communication						
* Operations				PotNumber : Patro		1				
				(Agent Communication)		1				
					and the second second	_				
					Apply	ancel				

Figure 220. Provide Port Number

3. Click on **Apply** to save the changes.

Appendix B Configuring Secured Communication

It is recommended to use the secured communication for data collection in order to maintain authentication, data protection and data integrity.

Please note, secured communication cannot be enabled if the .NET framework version in the MCS-DC launch node is below 3.5. Please note, if secured communication is enabled in the MCS-DC tool, then all the computer nodes from which data collection has to be done should have a valid certificate for secured communication. It is solely user's responsibility to get the Certificates.

If the .Net Framework version on the MCS-DC launch node is above 3.5, MCS-DC tool does the below checks during the node scan.

- If secured communication is not enabled, a message is thrown during the node scan, saying "Secured communication is not enabled. It is recommended to use secured communication. Confirm to proceed without that". User has **Confirm** option to proceed with the node scan and **Cancel** option to abort the scan operation.
- If secured communication is enabled, user can proceed with the node scan.

Secured communication is established through digital certificates. As per the requirements, users can generate certificates in three different modes as mentioned below:

- Self-Signed Certificates
- Third Party Certificates
- Certificate Authority

Before proceeding with further steps for secured communication using certificates, user must obtain certificates from one of the above mentioned modes or user should have a Certificate Authority Server configured and running.

Secured communication certificates should be installed in each node as mentioned below. Secured communication between MCS-DC launch node (server) and other nodes (client) in the network:

 Server certificate should be installed in MCS-DC launch node and client certificate should be installed in all the nodes in the network from where data need to be collected (including MCS-DC launch node). Secured communication between MCS-FW (server) node and MCS-DC launch node (Client):

- Server certificate should be installed in MCS-FW node and client certificate should be installed in MCS-DC launch node.



Secured Communication is optional.



For Self-Signed Certificate and Third-Party Certificates, it is solely user's responsibility to get the Certificates.

B.1 Selection of Server Certificate

Refer the procedure below to select the installed certificates in MCS-DC launch node (Server) and all the client nodes in the network.

1. In the Configuration screen click on the **settings** icon as highlighted in the below figure.

ABB Wy Control	System - Data Collector	=) Ø, X
E Collection for	Configuration Wizard	SID12345.Test 🔘 i
	Detected Systems 📀	
	H04 : 600xA	
	Controllers AC 200, AC 70, 110, 160 System Version 6.1.0-0	
		Continue

Figure 221. Basic Mode
Configuration								SID12345 Test	0
MI 😧					Controllers 📀				
	Performance	Lifecycle	Software	Security		Performance	Lifecycle		
0±A	11				AC 800M				
eelance					AC 70, 110, 160				
Operations					Freelance				
					AC 410, 450, MP, SG 400				
					Melody Rack				
					Mod300				
					QCS				

Figure 222. Advanced Mode

2. Settings screen appears, click on **General** tab. Enter the port number through which secured communication needs to be established.

ABB	Settings		×
General	Communication		
Port (Agent Co	Number : 23571		
		Apply Cano	cel

Figure 223. Communication Port

3. Settings screen appears, click on **Communication** tab.

ABB	Settings			×
General	Communication	Collection Retry		
Secured	Communication			^
Certificate S	Store: LocalMachin	ie	~	
TLS Comm	unication : TLS 1.2		~	
Available C	ertificates			
OPMHVOF 169.227.4 OPMHVOF	2 R 0.71 2 ¹ R			
Certificate II Issuer: CN Subject: C Version: 3 Effective D Expiry Dat Thumbprii	nfo: I=800xA Built-In Issuing N=OPMHVOPR rate: 2/23/2024 11:37:58 Ah :: 2/23/2026 11:37:58 Ah nt: 918DCF5D7FECE08F	Certification Authority AM 1 0863DD30771A954108C8	BA74D	•
			Apply	Cancel

Figure 224. Communication Tab

 Check the Secured Communication check-box. Select a relevant Certificate Store and TLS communication version. Selecting a Certificate Store shows available certificates in that store. Select a relevant certificate. Click Apply to save the changes.



In basic mode, the highest TLS version is automatically selected on remote computers. The communication will fail if it does not match the TLS version selected by the user on the host computer.

B.2 Selection of Client Certificate

If client certificate name is same as the name of the node where it is installed, the data collector agents will automatically detect the installed client certificate and use it for secured communication. If this is not the case, the user will have to select the client certificate in each node running the utility **ABB.Services.UpdateClientCertificate** (right click and run as administrator) from the folder path C:\Windows\Temp\MCSDC\<date_time> (for 800xA and Freelance) and C:\SPOHCLogger (for Symphony plus). This utility will be available only after deploying the collection agents to all the network nodes as part of data collection. After deploying the agents to all the nodes, go to each node and run the utility, select the certificate and then update configuration as mentioned in the figure below.

᠌ Update Client C	Certificate		×
Client Certificate	169.227.40.71	Select Certificate	
TLS Communication	TL512 ~		
	Update Configuration		

Figure 225. Update Client Certificate

ABB Service Certificate Browser pop up appears, select option **Select Certificate from Local Store**.

Identify the intended client certificate and select it. Click OK.

ABB Services Certificate Browser	;
Select Certificate from Local Store	
Certificate Store: LocalMachine	\sim
Available Certificates	
CN=169.227.40.71	^
	~
Certificate Info:	
Issuer: CN=169.227.40.71, OU=PAEN, O=ABB, L=Bangalore, S=KA	, C=IN
Subject: CN=169.227.40.71, OU=PAEN, O=ABB, L=Bangalore, S=H	(A, C=IN
Version: 3	
Expiry Date: 8/31/2023 2:44:38 PM	~
	OK
	UN

Figure 226. Client Certificate

B.3

Binding the server certificate to an IP address and port

It is required to bind the server certificate to the IP address and port used for secured communication. Follow the port binding procedure below.

https://docs.microsoft.com/en-us/dotnet/framework/wcf/feature-details/how-to-configure-a-port-with-an-ssl-certificate.

Appendix C Procontrol P13 source file (.csv) separators

The file location of P13 source file (.csv) is a mandatory input for P13 Lifecycle data collection. Please note that in the exported P13 source file the text separator must be double quotes ("), and the field separator must be a comma (,).

Progress 3 - B	BusAdmin	
File Edit EPR	OMs External Data Print Online Functions Info Intern	
Job: MAT	Export HW data	
	File name [C:\CP2T0P\DTA\MAT\HW File format C FIX (Fix Field Length) © CSV (comma seperated values) Text Seperator Field seperator Vite field name into first line 0%	

Figure 227. Export HW data

Appendix D System configuration export

D.1 Freelance System

This section provides a detailed explanation on how to export the Freelance system project configuration (structure) (file type *.csv or *.csvs), that is required for data collection.

1. In Configuration mode, select root node. Save project or any last changes done.

Freelance Engineering 2016 SP1 - connecttest - Configuration - DEMO								i X
Project Editor Elements Edit System Options Help								
1. 🗆 🖬 🕑 🔥 🐃 🕺 🗅 🖺 X 📟 🗰 🖼 💳 😫 🖧 🥔 🕢								
Explorer n.	Variables × T	ags x						
	🔁 🔤 🞯 🛛 😴 🥃 🛇				_			
01 connectest	Name	Comment	Туре	Res.	х	Object	Location	_
01 Software (SW)			-	, I				
- E 01 PS7 (AC 800F)	3200 CE042 X	Prozesswert	REAL	PS1	N			~
- • 02 PS6 (AC 800F) - • 03 PS5 (AC 800F)	3200 CF042 Xin	Prozesswert Eingang	UINT	PS1	N			
- 04 OP11 (GWY)	40800P011 IN	5 5	BOOL	PS1	N			
- 05 OP21 (GWY)	40800P011_MA		BOOL	PS1	N			
	40800P011_MM		BOOL	PS1	N			
- 08 OPC2 (GWY)	4080AP011 PR0		BOOL	PS1	N			
- 09 OPC3 (GWY)	4080AP011 PR1		BOOL	PS1	N			
11 PS2 (AC 900FL)	40800P021 10		BOOL	051	N			
- 12 PS3 (AC 800FR)	4090AP021_1L1		BOOL	001	N			
= 13 P-MA (P-MAC)	4080AP021_ILI		BOOL	051	N			
- 15 UFBs (P-FB)	4090AP021_MA		BOOL	001	N			
- 16 LS01 (VIS)	4000AP021_MA		BOOL	001				
02 Hardware (HW)	4000AP021_MM		BOOL	001				
- 01 PS4 (D-PS)	1080AP021_PR0		BOOL	0.01	IN .			
D2 SECNT1 (SEC)	4080AP021_PR1		BOOL	PSI	N			
03 Leer (FBD)	4080_70(012_1		REAL	P51	N			
05 Transt (FBD)	4080_44012_1000		UNI	PSI	N			
- 06 S4 (FBD)	4080_A4021_YOUE		UINT	P51	N			
07 MACHTEST (PL) (On)	4000_00022_Yout		UINT	PS1	N			
- 09 Grafik (FGR)	4080_A4023_1000		UNI	PS1	N			
10 AnaGenerat (PL) (On)	4080_44024_1000		UINT	PSI	N			
11 UH8 est (PL) (On)	4080_AP011_BAUS	Betehl AUS	BOOL	PS1	N			
13 PS_2USRTask (PL) (On)	4080_AP011_BEIN	Betehl EIN	BOOL	PS1	N			
14 PS 2USRTas00 (FBD)	4080_AP011_CE_X	E-Entst.Zuluftventilator	REAL	PS1	Ν			
	4080_AP011_CE_Xi	Proze6wert-Eingang	UINT	PS1	N			
17 GF_green00 (11)	4080_AP011_RMF	Entst. Zuluftventilator	BOOI	PS1	Ν			
- 18 amp_na00 (IL)	4080_AP011_SMA	Betriebsart Hand=0 / Auto=1	BOOL	PS1	Ν			
19 amp_offilio (II)	4080_AP011_SPS	Überwachung PS	BOOL	PS1	Ν			
21 Trans2200 (IL)	4080_AP011_SS	Fern-/Vorortbedienung	BOOL	PS1	Ν			
22 amp_naT00 (L)	4080_AP011_SSTO	Status Sammeistörung	BOOL	PS1	Ν			*
Project Chibraries	<							•
	,				_	12004 of 12004	action ALTOACCERT ON	MOLOCK

Figure 228. Freelance Engineering 2016 sp1

Project Editor Doments Edit System Options Help					
Save project D X 😡 🕮 🎟 🚹 😘 💰 📾	0				
Save tab	4 Variables × Tags ×				
Decumentation	- 173 M (2 3 3				
Check project	Comment	Type	Ret. X Object	Location	P Initia
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Show error list (27)	Destances	and as	061 M		
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Comment	Processment cingang	BOOK	PD1 N		~
Network		800	P51 N		×
Commissioning		8000	P51 N		Y
Project manager		BOOK.	061 M		
Close project		800	001 N		×
Exit Engineering Tool BF L)		800	P61 N		· ·
- 12 PS3 (AC 800FR)		800	P21 N		, v
13 P-MA (P-MAC)		8000	061 N		×
15 UFBs (P-FB)		800	PS1 N		×
L_ 15 LS01 (VIS)	1	8000	061 N		
C2 Hardware (HW)		8000	PS1 N		×
- 1 01 PS4 (0-PS)		800	061 N		×
- 02 SFORT1 (SFC)		PEAL	PG1 N		× ×
03 Leer (FBD)		LINT	061 N		*
- 05 Trans4 (F80)		LONT	051 N		· ·
06 S4 (F80)		LENT	051 N		Y
- 08 Trend (TR_0-05)		LINT	P51 N		×
- O9 Grafk (FGR)		LENT	DS1 N		· ·
10 AnaGenerat (PL)(On)	Basabi Aris	BOOK	061 N		×
- 12 FB (P-FB)	Balaki ETN	800	PS1 N		· ·
13 PS_2USRTask (PL) (On)	E-Enter 7.6.dtventiator	REAL	P51 N		×
14 PS_205KTas00 (FED)	Drozalizati Einsten	LENT	P51 H		×
- 16 GR000 (11)	East Table and State	800	067 14		×
17 GR_green00 (1)	Batrisheart Manfall / Autor	1 800	051 N	_	
18 amp_neou (L)	Observatives PE	8000	P31 N		
- 20 GR_9/T00 (1)	Earn. Absorbadian on	800	P.21 H		×
21 1/8/62200 (A)	Status Campainton my	800	051 N		Y
- 23 amp_offT00 (%)	Status sandheistrung	EN BOOK	0G1 N		×
- 24 GR_red00 (11)	Status Consister Channel	800	001 N		, v
- O subrun (r)	scarcus internation scorcing	anyove.	P.04 11		

 Now from Project Tree Configuration mode go to menu item Project > Project manager. That brings to different window.

Figure 229. Project Menu

3. Under Manage project click on **Export** option.



Figure 230. Export option

Project manager			User na	ni -	Faitword
Freelance Engineering	Manage project		Documentation		
Configuration	Save project		Release notes What's new in this version		
	+Export Bi+Export backup Collete	Export project	Second Second	• + Search Desktop	
	O Close	Organize - New folder			8.0
		Arcentes Ad	raries ministrator mputer	Sos	Bern type
Project details		🐂 Ne	twork FBulk		Filefolder
Project name: connectinat Project manager: plus FL STT Project no: Project order no: Project order no:		Commenta Solution Commenta Solution Commenta Solution Commenta Solution Commenta Solution So	DCTesting nnect Test_Export1 ont2	53,963 KB 53,963 KB	File fulder CSV File CSV File
Project size: 145163 K		🗯 Computer 🔹 🕫 🧫		1	
Version: 03/23/2006 10:56:23 Project comment		File name: Archrom Seve as type: Unicode export	naProj Netikov)		
		Hide Folders		Save	Cancel
				199	_
Edit project deta	18.]		Associate preview		

4. Select the folder and file name for the backup .csv\.csvs file to store.

Figure 231. Project manager tab

If the Project password is enabled in the freelance system, the export file type will be .csvs.

D.2 Advant MOD 300

This sections provides the procedure about how to export the Advant MOD 300 System project configuration (structure) (ATF file) that is required for data collection.

- 1. Open AdvaBuild Control Builder.
- 2. Select and open the project.
- 3. To export project, goto menu **Object > Special Commands** and select **Save_ATF**.



Figure 232. Object Tab

4. This creates an ATF file. Save it, so that it is available for Installed Base Management.

D.3 AC100 System

Following is the procedure to extract the .bax file in a AC100 node:

- 1. Open application builder in AC100 node.
- 2. Select the desired controller node which is Online.

View Vorticity Vorticity Vorticity Image: Static Product Party Image: Static Party Image: Static Party Image: Static Party Image: Static Party Image: Static Party Image: Static Party Image: Static Party Image: Static Party Image: Static Party Image: Static Party Image: Static Party Image: Static Party Image: Static Party Image: Static Party Image: Static Party Image: Static Party Image: Static Party Image: Static Party Image: Static Party Image: Static Party Image: Static Party Image: Static Party Image: Static Party Image: Static Party Image: Static Party Image: Static Party Image: Static Party Image: Static Party Image: Static Party Image: Static Party Image: Static Party Image: Static Party Image: Static Party Image: Static Party Image: Static Party Image: Static Party Image: Static Party Image: Static Party Image: Static Party Image: Static Party Image: Static Party Image: Static Party Image: Static Party Image: Static Party Image: Static Party Image: Static Party Image: Stati Party Image: Static Party<						Application Builder - AC100 - [Node List]	- 0 ×
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mode2 A (11022 17 1 mode3 A (100 vin MMSo 22 10 3 mode4 A (2011 17 0 mode6 A (27012) 17 0 mode6 A (27013) 17 0	1	≜Node node1	Node Type	Net, Node	Bus, Station	RNet, RNode Post Comment	
node3 AC 160 um PM66/22 1.0 3 node6 AC 100 1 1.7 0 node6 AC 701 2 1.7 0	2	node2	AC 110 22		1.7	1	
nedet AC 10 21 1.7 0 nede AC 70 12 1.7 0 nede7 AC 70 10 1.7 0 AC 70 10 1.7 0 AC 70 10 1.7 0 AC five the Windows Go to System in Control Panel to activate Windows Go to System in Control Panel to activate Windows	3	node3	AC 160 with PM66x 2.2		1,10	3	
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Gio to System in Control Panel to activate Windows							Activate Windows
Extend View. Modify. Lock/Unlock Undate Windows							Go to System in Control Panel to activate
	F.u.	weiVhee	Modify Lock	Unlock	1	date	Windows.

Figure 233. Application Builder AC100

3.	Right-	click	and d	open	the	function	chart k	builder.
	J -							

			Application Builder - AC100 - [Node List]	- 0
e View	Options Tools Window Help	v al		
100 29		<u>R</u> (
Ngme: 3	Filter:			
a Node	Note Time Net N	Inde Bus Station BNet I	RNorfe Rost	
node1	AC 110 2.3	1,7	1	
node2	AC 110 2.2	1,7	1	
node	Function Chart Builder	7	1	
nodel	Node Structure Function Chart Builder	7	0	
node	Text Editor	1	U	
	New			
	Delete			
	Lock/Unlock			
	Modify			
	Modify Tool Versions			
	Copy			
	Names Only			
	Update			

Figure 234. Function Chart Builder

4. Once the function chart builder is opened, go to file and click on **generate source code**.

		Function Chart Builder - Node: AC100/NODE3 - [<2> DB Section]	- 0
Edit View Options PC-	Section PC-Terminal	il Target Test Window Help	-
Initialize	8 四面 (월 <u>이</u> 어 Max 潮話 뜨그치크 ??@ ? №	
Rebuild Element Types	Termina	ak de la constante de la const	
lew Section		×	
Upen Section	3		
On-line Preparation Mode	Calnane	e Address	
Save	Ctrl+S Al801	A8800 1.10.10.0	
Skip Modifications			
Set Password			
Generate Target Code			
Generate Source			
Expand Node Structure			
Check PC Source			
Backtranslate Source			
Export DB Section			
Import DB Section			
Print	Ctrl+P		
Print Setup			
Page Setup			
Exit			
		Activate Wite	
		Activate Win	rdows
		Activate Win Go to System in Windows	udows Control Panel to activate

Figure 235. Generate Source

	Function Chart Builder - Node: AC100/NODE3 - [<2> DB Section]	- 0 x
File Edit View Options PC-Section PC-Terminal Target Ter	at Window Help	_ <u> </u>
Contract of C		^
Generate Sou	rce Code	
PC File Name PC File Name PC File Name PC File Name Point Softer Pergram. PC Hero Designator. Fore: To Pointegrate TO: Predice Nat Oraceters CK Greed Heb	P DB Section DB File Name CA DB Code Generator Options If Include System Disfusion If Include System Disfusion P Ref. DB Enersitus WODEP* -DB Ren Designations Im Ref. DB Enersitus WODEP* -DB Ren Designations -DB Ren Designations -DT To	
	Act Go t	ivate Windows o System in Control Panel to activate
<u>Create</u> <u>Edt</u> <u>Delete</u> Connect	Win	dows.

5. Enter the desired file name on the pop up which appears and click **OK**.

Figure 236. Generate Source Code

6. The information of the nodes will be generated as DB source code. You will get a message that "DB source code generator finished successfully" in the function chart builder.

Figure 237. Function Chart Builder - Node AC 100/NODE3

File Edit View Options PC-Section PC	-Terminal Target Test Wi	ndow Help				- # ×
81 🕮 51 TE 🖬 🖨 Zoom:100%	※1941日 の 20 ある	이 했던 친그친네.	7 2 8 8			
C: FDOLACIO VacIane NODES-DEDATA-CI : DEFAULTS for A1801 : DEFAULTS for A18001 : DEFAULTS for A2645 : DEFAULTS for A2645 : DEFAULTS for A2646 : DEFAULTS for A26464 : DEFAULTS for C1631 : DEF	C401.BAX					
*** DEFAULTS for AXOS646			DEDATA			
*** DEFAULTS for SC610	Home Share	View			v 0	
*** AIS801	🛞 🕖 + T 🚺 🔂	oj\AC100\NODES\NODE1\DBDAT	A	V C Search DE	DATA P	
*** AX05645	🔆 Favorites	Name	Date modified	Туре	Size	
*** AX646	E Desktop	CL101.BAX	04/12/2018 4:29	PM BAX File	5 KB	
*** AX05646	Downloads					
*** CI630	an necen paces					
*** CI671 *** PM665	🎼 This PC					
SCSI0 DB Source Code Generator finished	Su Network					
					Activate Win Go to System in (Windows	dows Control Panel to activate

7. This file will be saved in C:\Proj\node\dbdata as .bax file.

Figure 238. Saved file path location

8. Figure shows the exported sample of .bax file with AC100 configuration details.

		AS100-EDIT - [140901]	= 🗆 X
<u><u>File</u> <u>E</u>dit</u>	<u>V</u> iew <u>O</u> ptions <u>W</u> indow <u>H</u> elp		- 8 ×
DIGIGI	x Ba (B) # # # 6-6 8-6 8		
(**********		****)	^
(* 140901.BA)	generated with FCB Release 6.2/1 14-SEP-2016 15:09:2	24 *)	
(* Node type:	AC 110 2.1 Base SW: AC110 BASE SW* 2.	1 *)	
(* Additional	options: HPC502 2.1/0, OPT1: extended PC 2.1	*)	
(*		*)	
(*		•)	
BEGIN DB			
HEADER			
Design_ch	C Norling		
Tech_ref	MW		
Resp_dept	HDE		
L Text2	FXC3 2.0/1		
L Text3	Project		
L Text4	Voltage Regulator HPC 840		
R_Text2	L		
R_Text3	XYK 214 121-		
Rev_ind	0		
Language	E		
BEGIN GENERAL	DEFAULTS		
DEFAULT	DI620		
:BUS	0		
:STATION	0		
: POSITION	0		
TVDE	1		
.1112	51620		
DEFAULT	DIS620		
:SW_REF			
DEFAULT	00620		
STATION	0		
			×
<u> </u>			>
Ready			NUM 1 1

Figure 239. Sample of .bax file with AC100 configuration

D.4 Melody Rack

D.4.1 Composer Melody Rack version 6.0 or later

Procedure to obtain System Project Configuration or Melody Rack Island Devices (filetype *.csv with ';' delimiter)

- Control Engineering Mel_61 - 10 × 🔀 🖪 🗮 🤁 💥 🔎 📴 🖉 🖉 Running 41 v B Project Structure Y Nam Description X Settings Project Structure Dialog for system, user and project settings tistic information on objects used within the project R Functional Structure 28 System Structure 🗟 Database Information Information about database users Eg Location Structure Backup Information Information about project backup and maintenance Documentation Structure Eg Bus Topology Structure El 💥 Settings Comment Library Path Project Name Server Yoject List Eg ubrary Structure Mel_61 Mel_61 MELODY61 d:\Symphon 다 System - Product Documentation Communication Cache-Manager Print Options - User - 💥 Common - 🚳 User Interface Language - (I) Notification - Editor Colors Project: Mel_61 A Functional Planning Archiving PROFIBUS Authorizations Project Language Cancel Apply Heip X 🖪 🗙 🗃 😂 Messages Logging • • • • 2 Administrator
- 1. Open Composer and switch to Project Structure view.

Figure 240. Open Composer and switch to Project Structure view.



2. Right-click on the project then select Open.

Figure 241. Open the project.

Image: Structure Name Configuration of System Function Image: System Structure System Structure System Structure Image: System Image: System Image: System Image: System Image: System <t< th=""><th>🖾 Control Engineering - Mel_61</th><th></th><th></th><th></th></t<>	🖾 Control Engineering - Mel_61			
Bus Topology Structure Project Structur		Running 🔽		41
Project Stucture Project Stucture System Stucture System Stucture Commant System References System References overview Simulation certeire overview Mane Text Sys 1 Type CSSystem Onet 1 Onet	Eg Bus Topology Structure	Name	I	Description
	Eg Project Structure	System	Configuration of System Parameter	
Comment Comment Comment System Structure Comment C	Eg Functional Structure	討 Islands	List of Islands	
Isocation Structure System References System references overview Isocation Structure Smulation references overview Isocation Structure System References System references overview Isocation Structure System References System references overview Isocation Structure Internal Net Type Internal Net Type Internal Net Type Internal Net Type Onet Onet Onet <t< td=""><td>Eg System Structure</td><td>Comment</td><td>Maintenance of object related long text comment</td><td></td></t<>	Eg System Structure	Comment	Maintenance of object related long text comment	
Egy Bocamentation Structure Simulation Overview Simulation references overview Image: Structure Name Text Sys 1	Eg Location Structure	System References	System references overview	
Yea Text By Boardy Structure Sys 1 Type CSsystem Internal Net Tame Internal Net Type Onet 1 Onet 1 Onet(SC) 1 Onet(SC) Internal Net Type State Cancel Apply Messages Logging	Eg Documentation Structure	E Simulation Overview	Simulation references overview	
Eg lubrary Structure Sys 1 Type CSSystem Internal Net Tigpe Onet 1 Onet(SC) 1 Conet(SC) Conet(SC) Conet Apply Messages Logging	T릴 Bus Topology Structure	Name	Text	
	Eg Library Structure	Svs 1		
Conce Apply Heb Messages Logging		Type		
Internal Net Tupe		Cooysten		
Cancel Apply Let Name				
Conce Apply Heb Messages Logging		Internal Net Name	unternal Net Type	
Cancel Apply Heb		Unet 1	Uner	
Cance Apply Heb Messages Logging		(criticitory) +	(energed)	
C Cance Apply Hep Messages Logging				
Cance Apply Hep				
Messages Logging	6 5		Cance A	нер
2. Administrator	Messages Logging			
			2 Administrator	A

3. Select Bus Topology Structure.

Figure 242. Select Bus Topology Structure view

Control Eng	gineering - Mel_61					-02
X 🖪 🗄			Running 💌			•
Bus Topolog	y Structure	~	Name	l	Description	-
日間 Mel_61: しの書 <mark>595</mark> 一一市 (市)	Mel 61 Branch Print Export	: (SC)	M System	Configuration of System Parameter List of Islands Maintenance of object related long text comment System references overview Simulation references overview		
	Document References		Name	Text		
	System References		Sys 1			
	Device <u>S</u> can		CSSysten			
			Internal Net Name	Internal Net Type		
			(netSC)1	lonet(SC)		
		<u></u>		Cancel	oply H	leþ
essages Lo	igging					
elody syst	em: Sys 1			🙎 Administrator	- 100 C	

4. Right-click on the system and select **Export** then **Excel**.

Figure 243. Select Export to export in Excel

Control Engineering - Hel_61	Running 🔽	×
B Rus Tanalassu Structure	Name	Description
다 아이 아이아 아이오 아이오 아이오 아이오 아이오 아이오 아이오 아이오	Association Control of the second se	Infiguration of System Farameter t of Islands intenance of object related long text comment stem references overview Ualation references overview Text
	Evanort Data	xi
	idect report	
	Channel Assignment (Exchange Format)	Туре
	Sport Discol Excel File Cov Filter OK Cancel	Нер
		Cancel Apply Hep
Managana Langing	21	
Lucesoñce robhuñ		

5. A window with multiple export format option opens. Select **CSV** option.

Figure 244. Select CSV Option

6. Select **Bus Sharing Units** from **Select Report** drop down option and press **OK**.



Figure 245. Export Data Bus Sharing Units

7. This creates a CSV file. Once the CSV file is created, Save it.

D.4.2 Asset structure export

1. Open Composer and switch to Project Structure view.



Figure 246. Project Structure View

2. Click on **Settings**, to get the below window. Under Working Directory, select the location for saving the asset structure.

Communication Communi
Cache-Manager User Common Guser Interface Language Motification Celtion Colors Project: TESTIM Central Settings Central Sett

Figure 247. Operations Configuration Window

		STYLE	CONTROL ENGIN	IEERING EERING	9	S+ Engineerir	rg	0 0
H Back	문용 Bus Topology Str	ucture	Ý		Name			
Bulk Engineering	✓ 税 PM876_1, Re ✓ 品 Sys 2	storedFrom_PM876_ Branch	1_2019.10.24_12.48	System Fil Islands		Configur List of Isl	ration of System Pa lands	rameter
Topology Design		Print		Name			fext	
		Export	>	Excel	-			
		Document Referen	nces	Asset Structure				
Connectivity Engineering		Upload operable P	arameters					
IEC 61850		System References	s ew	Onet 2	Internal Net Name	0	Internal Net Typ net	e
HMI Configuration		Signal Monitoring	l	Cher(SC) S			net(36)	
Universal Connect		Device Scan						
Messages Logs	<	fo ①Warnings) Belete Clease	ar All 🖾 Save		Pind	Cani Q Show Details	rel Appi
Т	ool Time		M	essage		Context	Action	Object
🚺 🗌 Project	Admin 3/16/2021	3: TEST_1 is CI	osed			ProjectDashb	Executing clo	ABB.Sympho
🛈 🔲 Project	Admin 3/16/2021	3: System proj	ect restoration started.			RestoreSyste	RestoreSyste	ABB.Sympho
0 Project	Admin 3/16/2021	3: Restore eng	ineering project CR22	MSRT from CR22_M	ISRT\CR22_MSR	DatabaseVie Activate	Executing Po Windows	ABB.Sympho
	I CDCiAd-				Industrian Core 2	Go to Sett	tings to activate	Windows.

3. Select system structure and click on **Export** to export the assets.

Figure 248. Export the asset from system structure

4. Once exported, assets will appear as shown in the following image.

Name	Date modified
Station EP204A09-Assets.xml	25/03/2019 14:41
Station 01C05 (CMC60 102)-Assets.xml	25/03/2019 14:41
Station 01G09 CMC70_103-Assets.xml	25/03/2019 14:41
Station 04A09-Assets.xml	25/03/2019 14:41
Station 06C09 S800 DPV1-Assets.xml	25/03/2019 14:41
Station 08A09 PM877 MigraAssets.xml	25/03/2019 14:41
Station 10A09 Turbotrol-Assets.xml	25/03/2019 14:41
Station 11A09-Assets.xml	25/03/2019 14:41
Station 13A (PM875-2 FW207-Assets.xml	25/03/2019 14:41
Station EP204C09-Assets.xml	25/03/2019 14:41
WTM50A-Assets.xml	25/03/2019 14:41
WTM50B-Assets.xml	25/03/2019 14:41
WTM50C-Assets.xml	25/03/2019 14:41

Figure 249. Exported Assets



Asset structure export option is not available for Symphony Plus system in Composer version 7.0 SP1 and SP2.

D.4.3 Composer Melody Rack version 5.2 or earlier

Procedure to obtain System Project Configuration or Melody Rack Island Devices (filetype *.csv with ';' delimiter)

1. Open **Composer** and switch to **Project Structure view**.

📴 D330 // AC 870P Engineering Workplace / Project Structure (Running)				
🔀 🖺 😂 😸 🖉 🎉 🐱 😧 🚯 Running	Y			
E Project Structure	Name	T		
Project Structure	Settings		Dialog for sys	stem, user and pr
E Functional Stratture	Project Statistic		Statistic infor	mation on objects
E System Structure	Catabase Information		Information a	about database us
Es Location Structure				
E Documentation Structure				
E Bus Topology Structure				
E Library Structure				
	Project Statistic Date of	f last update:	la i	-1-
		Planning	Release	Running
	All Binary Signals	0	0	0
	Analog Signals	0	0	0
	🕸 Limit Signals	0	0	0
	Packed Boolean Signals	0	0	0
	Multi Signals	0	0	0
	🖧 Process Points	0	0	0
	SQ Function Diagrams	0	0	0
	Function Diagram Pages	0	0	0
	Gubicles	0	0	0
	Controller	0	0	0
	I/O Units (Local I/O)	0	0	0
	R there and the lates	7		

Figure 250. Open Composer and switch to Project Structure view.



2. Right-click on the **Project** then select **Open** to open customer's project.

Figure 251. Select Open to Open customer's project

3. If the project was already opened, the **Bus Topology Structure** view has to be selected.

X		18 P	100 4	0	Running
🖁 Sy	stem Structure				
1	Project Structure				
6	Functional Structure				
E	System Structure				
1	Location Structure				
E:	Documentation Structure				
1	Bus Topology Structure				
1	Library Structure	43			

Figure 252. Bus Topology Structure view



4. Right-click on the system and select Export then CSV.

Figure 253. How to export CSV

C G	Leonal.				
bay Stra Bus	Sharing Units	v re		Description	
EMO: P	n		Configuration of System Parameter List of Islands		
T Syster O	File		Maintenance of object related long be-	vt comment	
Onec:+	Excel		Overview of document references		
			Version relevant information of object		
			Text		
-		Heb			
		Cssysten			
		Internal Net Nam	e		
		Onst [7960]	Onot		
		Criet(SC)[13199]	Chet(SC)		

5. A window with multiple export format option opens. Select Excel for .csv.

Figure 254. .CSV file export option

6. A window opens where the Bus Sharing Units report needs to be chosen.



Figure 255. Choose Bus Sharing Units report

- 7. Select **Excel** option for .csv. Provide desired path and file name to export the configuration.
- 8. This creates an .csv file. Once the .csv file is created, save it.

D.4.4 Melody CSE_Conf File

CSE_Conf file contains the EPC and IP addresses of all of the modules part of the system. It must be exported from Composer Melody Rack too. It is stored in the below path.

C:*Program Files (x86)**ABB Symphony Plus**Engineering**Composer Melody Rack*

Or in

C:*ProgramData**ABB Symphony Plus**Engineering**Composer Melody Rack*.



The folder **ProgramData** is hidden, choose Show hidden files option in Windows to view the files.
Appendix E SHA256 Hash verification

ABB has created a tool (digitally signed) that can be used to calculate the SHA256 Hash. The tool, **2VAA005130.zip** (Symphony Plus SHA256 Hash Calculation Tool Version 1.1.0) can be downloaded from ABB library. This is by no means mandatory, it is an additional check that is up to the user.

To run the tool, perform the following steps:

- 1. Extract the file SHA256HASH.exe to the desired directory. In this case it is *C:\MCS-DC\SHA256HASH.EXE*
- Copy the MCS-DC zip file downloaded from from My Control System (MCS) portal or ABB library, to the desired directory. In this case it is C:\MCS-DC\7PAA002122_MCSDC_v2.xx.ZIP.
- 3. Click the Start button. In the Search box, type Command Prompt or cmd, and then press Enter, wait for the command prompt window to open.
- Type the following command in the command prompt C:\MCSDC\SHA256HASH.EXE "C:\MCS-DC\7PAA002122_MCSDC_v2.xx.ZIP" and press enter.

5. The tool will calculate the Hash and return the value to the screen followed by the name of the file that was hashed.



Figure 256. Hash Check

- 6. Compare this Hash value with the one listed in the summary field of MCS-DC package, in ABB library. A matching value confirms that the downloaded package is identical to the source. If the values do not match, do the following.
 - Download the package again, repeat the steps.
 - If the problem persists, contact ABB Support Line (level 2).
- 7. Alternatively, users can compute SHA256 Hash value, using Windows power shell. Follow the link given below for Hash value calculation using Windows power shell: https://docs.microsoft.com/en-us/powershell/module/microsoft.powershell.utility/get-filehash

Appendix F Testing the WMI health of a computer

Following procedure shall be executed to test the health of WMI queries within the local computer (MCS-DC launch node) as well as between local computer and remote computers.

F.1 Health check of WMI query within the local node

 In MCS-DC launch node, Go to the system32 folder and select wbemtest.exe application. Hold Shift and Right-click, which brings up the "Run as different user" as shown in Figure 257.

→ → ↑ 📕 > This PC > Local Disk (C:) > V	Vindows > System3	32 ≯ wbem					~	υ	
	Name	^	Da	te modified	Type	Size			
★ Quick access	s whemcntl.dll		6/7	7/2021 1:22 AM	Application extension	350 KB			
Documents 🖈	wbemcons.dll		12	/7/2019 2:38 PM	Application extension	75 KB			
Downloads *	WBEMCons.m	of	12	/7/2019 2:38 PM	MOF File	19 KB			
Fictures A	s wbemcore.dll		4/1	19/2022 1:30 AM	Application extension	1,905 KB			
Arc	s wbemdisp.dll		12,	/7/2019 2:38 PM	Application extension	292 KB			
Desktop	wbemdisp.tlb		12	(7/2019 2:38 PM	TLB File	59 KB			
Security Assessement	🗟 wbemess	Open		7/2019 2:38 PM	Application extension	503 KB			
Sustam32	🗟 wbemprc 😽	Run as administrator		19/2021 11:27 PM	Application extension	45 KB			
Systems	S wbemsvc	Run as different user		9/2021 11:27 PM	Application extension	62 KB			
OneDrive - ABB	i wbemtes	Hash	>	7/2019 2:38 PM	Application	215 KB			
OneDrive - Personal	🗋 wenesve.r 🛃	Classify and protect		7/2019 2:38 PM	MOF File	4 KB			
	WdacEtw	Pin to Start		7/2019 2:39 PM	MOF File	65 KB			
This PC	🔊 WdacWm 🧢	Move to OneDrive		7/2019 2:39 PM	Application extension	143 KB			
3D Objects	🗋 WdacWrr 🔛	Edit with Notepad++		7/2019 2:39 PM	MOF File	17 KB			
Desktop	WdacWrr	Share		7/2019 2:39 PM	MOF File	2 KB			
Documents	Wdf0100	Pin to taskbar		7/2019 2:38 PM	MOF File	5 KB			
Downloads	Wdf0100	Copy as path		7/2019 2:38 PM	MOF File	1 KB			
) Music	wdigest.n	Restore previous versions		7/2019 2:39 PM	MOF File	2 KB			
Pictures	WFAPIGP -	Send to	>	7/2019 2:38 PM	MOF File	2 KB			
Wideor	S wfascim.c			2021 1:22 AM	Application extension	874 KB			
The set Disk (C)	wfascim.r	Cut		/2019 2:39 PM	MOF File	262 KB			
Cocal Disk (C:)	wtascim_	Сору		/2019 2:39 PM	MOF File	7 KB			
Network	WFP.MOI	Create shortcut		/2019 2:38 PM	MOF File	1 KB			
	wts.mot	Delete		/2019 1:25 AM	MOF File	3 KB			
	wnqiprov 🤤	Rename		/2019 2:39 PM	MOF File	4 KB			
and the state of t	vvm32_D(Droportion		72019 2:58 PM	WOF File	3 KB			84-

Figure 257. System32 Folder

2. Click on "Run as different user" option, which brings up the following screen. Provide the user credentials which were provided as input to MCS-DC for collecting data on this computer and click on **OK**.

Windows Security	×
Run as different user	
Please enter credentials to use fo \wbemtest.exe.	or C:\Windows\System32\wbem
User name	
Password	
Domain: ASIAPACIFIC	
ОК	Cancel

Figure 258. Enter Credentials

		Connec
Enum Instances	Open Namespace	Edit Context
Create Instance	Query	Create Refresher.
Open Instance	Notification Query	
Delete Instance	Execute Method	1
	Enum Instances Create Instance Open Instance Delete Instance	Enum Instances Dpen Namespace Create Instance Query Open Instance Notification Query Delete Instance Execute Method

Figure 259. Windows Management Instrumentation Tester

3. Clicking on Connect brings up the following screen. To check the health of WMI query within the local node, click on the **Connect** button without entering any credentials. Health check of WMI query from local node to a remote node shall be done by entering the remote node IP address and access credentials.

Namespace	Connect
root\cimv2	Cancel
Connection:	
Using: WbemLocator	(Namespaces)
Returning: IWbemServices	Completion: Synchronous
User:	
Password:	
Password:	
Password: Authority:	
User: Password: Authority: Locale	How to interpret empty password
User: Password: Authority: Locale	How to interpret empty password
User: Password: Authority: Locale Impersonation level	How to interpret empty password
User: Password: Authority: Locale Impersonation level C Identify	How to interpret empty password NULL O Blank Authentication level None © Packet
Authority: Password: Authority: Locale Impersonation level Identify Mersonate	How to interpret empty password NULL O Blank Authentication level None Packet C Connection C Packet integrity

Figure 260. WMI query health check - Local computer

.onneet	
Namespace	Connect
\\169.227.40.11\root\cimv	2 Cancel
Connection:	
Using: WbemLocator	(Namespaces)
Returning: IWbemServices	Completion: Synchronous
Authority:	
Authority:	How to interpret empty password
Authority:	How to interpret empty password
Authority:	How to interpret empty password
Authority:	How to interpret empty password
Authority: Locale Impersonation level C Identify Impersonate	How to interpret empty password NULL C Blank Authentication level None Packet Connection C Packet integrity

Figure 261. WMI query health check - Remote computer

4. Successful connect brings up the following Window.

Windows Manager	ment Instrumentation	n Tester	- 🗆 ×
Namespace: root\cimv2			Connect Exit
-IWbemServices			
Enum Classes	Enum Instances	Open Namespace	Edit Context
Create Class	Create Instance	Query	Create Refresher
Open Class	Open Instance	Notification Query	
Delete Class	Delete Instance	Execute Method	
Method Invocation C Asynchronous	Options	🔲 Enable All Privi	leges
C Synchronous		Use Amended	Qualifiers
 Semisynchron Use NextA 	ous sync (enum. only)	Direct Access	on Read Operations
10 Batch	Count (enum. only)	5000 Timeout	(msec., -1 for infinite)

Figure 262. Connection successful - Local

mespace:			Connect
169.227.40.11\roc	ot∖cimv2		Exit
Vbem Services			
Enum Classes	Enum Instances	Open Namespace	Edit Context
Create Class	Create Instance	Query	Create Refresher
Open Class	Open Instance	Notification Query	
Delete Class	Delete Instance	Execute Method	
ethod Invocation (Options		
C Asynchronous		Enable All Privil	eges
C Synchronous		Use Amended	Qualifiers
Semisynchron Use NextA	ous sync (enum. only)	Direct Access of	on Read Operations

Figure 263. Connection successful - Remote

5. Click on **Query** button in above screen brings up the following screen.

Query	
Enter Query	
	^
	~
Query Type	Apply
WQL Retrieve class prototype	Cancel

Figure 264. Enter Query

- Enter the Following query in above screen and click on Apply button.
 select * from Win32_OperatingSystem
- 7. Successful result of the above query bring the following screen.

WQ	L: select * from W	in 32_OperatingSystem	Close
1 objects	max. batch: 1	Done	
in32_OperatingSy	stem=@		

Figure 265. Query Result

8. Double click on the object **Win32_OperatingSystem=@**. Properties of this object will be listed as shown in Figure 266. For example, the property 'Caption' has a value 'Microsoft Windows 10 Enterprise'. The WMI query for this property is successful.

Qualifiers				
dynamic	CIM	Property Name	Class of origin	Save Property
Locale provider Singleten	CIM	Caption	CIM_ManagedSystemElemer	Cancel
<		Туре		
Add Qualifier	Edit Q	CIM_STRING -	Г Алтау	
roperties		Value C NULL @ Not NULL		
BuildNumber BuildType	CIM_ CIM_	Microsoft Windows 10 Enterprise		
Caption Code Set	CIM			
CountryCode	CIM			
CreationClassName	CIM	<	>	
CSCreationClassMama	CIM	0		
Add Property	Edit Pr	C Key C Indexed C	Not NULL 💿 Normal	
lethods		CIMTYPE CIM_STRING	string	Add Qualifier
				Delete Qualifier
				E IN O IN

Figure 266. WMI query - OS caption

Appendix G Prerequisite tool

Copy the tools folder from the MCS-DC package to the C:\Temp folder of each computer node in the network. Double-click the file MCS-DC-Prerequisite_Tool.exe to run the tool.

→ This PC → Local Disk (C:) → MCS	DC builds > MCSDC2.7_2.7.02	2301.11003 > MC	SDC2.7_2.7.02301.11003
Name	Date modified	Туре	Size
📙 Bin	1/17/2023 11:22 AM	File folder	
📙 Tools	1/17/2023 11:34 AM	File folder	
MCS-DC_Launcher	1/11/2023 10:20 AM	Application	142 KB
MCS-DC_Launcher.exe	1/11/2023 10:13 AM	CONFIG File	1 KB

Figure 267. Tools folder

> This PC > Local Disk (C:) > Windows > Temp > Tools				
Name	Date modified	Туре	Size	
Config	1/17/2023 11:47 AM	File folder		
Icons	1/17/2023 11:47 AM	File folder		
Logs	1/17/2023 11:47 AM	File folder		
Output	1/17/2023 11:34 AM	File folder		
ABB.AS.DC.AppSettings.dll	1/11/2023 10:15 AM	Application extens	16 KB	
ABB.AS.DC.Base.dll	1/11/2023 10:15 AM	Application extens	80 KB	
ABB.AS.DC.CommonCollector.dll	1/11/2023 10:15 AM	Application extens	218 KB	
ABB.AS.DC.CommonInterfaces.dll	1/11/2023 10:15 AM	Application extens	32 KB	
ABB.AS.DC.Commons.dll	1/11/2023 10:15 AM	Application extens	500 KB	
ABB.AS.DC.ContextHelp.View.dll	1/11/2023 10:15 AM	Application extens	21 KB	
ABB.AS.DC.DataFormats.dll	1/11/2023 10:15 AM	Application extens	64 KB	
ABB.AS.DC.Encryption1.dll	1/11/2023 10:15 AM	Application extens	28 KB	
ABB.AS.DC.SPDCDataStructure.dll	1/11/2023 10:15 AM	Application extens	80 KB	
ABB.AS.DC.UIControls.dll	1/11/2023 10:15 AM	Application extens	576 KB	
ABB.SPDC.Helpers.dll	1/11/2023 10:15 AM	Application extens	44 KB	
Interop.ABB.SPDC.Helpers.PPA.dll	1/11/2023 10:13 AM	Application extens	15 KB	
Interop.ABB.SPDC.Helpers.PPA1.dll	1/11/2023 10:13 AM	Application extens	13 KB	
Interop.ABB.SPDC.Helpers.PPA2.dll	1/11/2023 10:13 AM	Application extens	13 KB	
Interop.ABB.SPDC.Helpers.PPA3.dll	1/11/2023 10:13 AM	Application extens	12 KB	
Interop.NetFwTypeLib.dll	1/11/2023 10:13 AM	Application extens	12 KB	
MCS-DC_Prerequisite_Tool	1/11/2023 10:20 AM	Application	62 KB	
MCS-DC_Prerequisite_Tool.exe	1/11/2023 10:13 AM	CONFIG File	1 KB	
Prerequisite.DataFormats.dll	1/11/2023 10:20 AM	Application extens	13 KB	
Prerequisite.Validator.dll	1/11/2023 10:20 AM	Application extens	20 KB	

Figure 268. MCS-DC_Prerequisite_Tool

Click the next button after selecting the system and Domain/Workgroup as applicable.

ABB MCS-D	Prerequisite Tool -	 ×
	System Selection 🕢	
	System : Freelance 🗸	
	Workgroup Domain	
	Net	
ABB		

Figure 269. System Selection

As shown below, the tool will check for the applicable prerequisites for the selected system and populate the results. All the available prerequisites in the node will be listed with a green tick, in the 'Original status' column.

Une or more prerequisites are not met. To apply these, click on Apply Pr Prerequisite Status ? Prerequisites renty that Microsoft MET Framework 2.0 Service Pack 1 or above is installed on all node	erequisites .				
Prerequisite Status 🕜 Prerequisites Verify that Microsoft NET Framework 2.0 Service Pack 1 or above is installed on all node					
Prerequisites Verify that Microsoft .NET Framework 2.0 Service Pack 1 or above is installed on all node					
Verify that Microsoft .NET Framework 2.0 Service Pack 1 or above is installed on all node		Original Status	Status after applying	Status after reverting	
	Verify that Microsoft .NET Framework 2.0 Service Pack 1 or above is installed on all nodes part of data collection				
Turn on File and Printer sharing for all network profiles on all nodes	Tum on File and Printer sharing for all network profiles on all nodes				
Start "Server" service from services if it is not already running on all nodes		0			
Start "Windows Management Instrumentation" service from services if it is not already rur	nning on all nodes	0			
Create "LocalAccountTokenFilterPolicy" registry key on all nodes		8			
Enable Windows Management Instrumentation (WMI) in Windows firewall exception list	on all nodes	(8)			
Preservicite soluted to admin activities of user readential accorded as input for this and a cannot be verified by this tool		0			
		-			
			Apply Presenuisi	Revert Prerenuisites	Fill
Jate & Time	Message				
023-01-17 12:25:32	message Administrator privileges validation finished				
023-01-17 12:25:32	Administrator privileges validation started				
023-01-17 12:25:32	WMI in WindowsFirewall validation finished				
023-01-17 12:25:18	Whit in WindowsFirewall validation started				
023-01-17 12:25:18	LocalAccountTokenFilterPolicy validation finished				
023-01-17 12:25:18	LocalAccountTokenFilterPolicy validation started				
023-01-17 12:25:18	WMI service validation finished				
023-01-17 12:25:18	WMI service validation started				
023-01-17 12:25:18	service from services validation finished				

Figure 270. Original status

Click on 'Apply prerequisite' button to apply the missing prerequisites. This must be repeated for all nodes from which the performance data is to be collected.



In Windows XP and Windows 2003 Server operating systems, this tool cannot identify/set 'File and Printer sharing' and 'WMI in windows firewall' related prerequisites. Refer to the Section 2.5, Prerequisites to set them manually. Ignore the status of these two prerequisites, shown by the tool. Rest of the prerequisites will work fine.

Prerequisites	Original Status	Status after applying	Status after reverting		
entry that Microsoft. NET Framework 2.0 Service Pack 1 or above is installed on all nodes part of data collection	0	0			
um on File and Printer sharing for all network profiles on all nodes	0	0			
Jart "Server" service from services if it is not already running on all nodes	0	0			
tart "Windows Management Instrumentation" service from services if it is not already running on all nodes	0	0			
reate "LocalAccountTokenFilterPolicy" registry key on all nodes	•	0			
nable Windows Management Instrumentation (NMI) in Windows firewall exception list on all nodes	(2)	0			
recent internal stands of the admin minister of the residential provided as input for this node, cannot be usefued by this tool	0	0			
		Apply Prerequisi	tes Révert Prérequisit	es E	ot
te & Time Message Sol 42 420150 Excelle MAIl to Mindow Excelle If Righted					-
23-01-17 12 27 56 Enable WMI in Windows Firewall	Einade winn in kentooksinewali missied Einade Winn Windowsinewali				
23-01-17 12:27:56 Enable LocalAccountTokenFilterPolicy finishe	Enable LocalAccountTokenFilterPolicy finished				
23-01-17 12 27:56 Enable LocalAccountTokenFilterPolicy started	Enable LocalAccountTokenFilterPolicy started				
23-01-17 12:27:56 Enable File and Printer Sharing finished	Enable File and Printer Sharing finished				
23-01-17 12:27:51 Enable File and Printer Sharing started	Enable Fite and Printer Sharing started				
23-01-17 12:25:32 Administrator privileges validation finished	Administrator privileges validation finished				
23-01-17 12:25:32 Administrator privileges validation started	Administrator privileges validation started				
23-01-17 12:25:32 WMI in WindowsFirewall validation finished	WMI in WindowsFirewall validation finished				

Figure 271. Status after applying prerequisites

Now that all the prerequisites for data collection have been met, the node is ready for data collection.

Once the data has been collected, click the revert prerequisite button to revert the changes.

Status after spptying	Status after reverting		
Status after applying	Status after reverting		
0 0 0			
0			
C C C	0		
0	0		
Ø	0		
Analy Brannous th			
Apply Preceduisite	es Revert Prerequisites	Ent	
Message Disade XMI in WindowsFirewall finished			
Disable VMI in WindowsFirewall started			
Disable LocalAccountTokenFilterPolicy registry key finished			
Disable LocalAccountTokenFilterPolicy started			
Disable File and Printer Sharing finished			
Disable File and Printer Sharing started			
Enable WM in WindowsFirewall finished			
Enable VMII in Windowshirewait			

Figure 272. Status after reverting prerequisites

After reverting the changes, ensure that the 'Status after reverting' column matches the 'Original status' column

Revision History

Introduction

This section provides information on the revision history of this user manual.



The revision index of this user manual is not related to the actual product revision. Please note, MCS-DC 2.0.0 and 2.0.1 are managed releases. It is released to selected users to get feedback on the product, as it is a new product.

Revision History

The following table lists the revision history of this user manual.

Revision Index	Description	Date
А	First version for MCS-DC 2.0.0 (Managed release)	September 2021
В	This version is for MCS-DC 2.0.1 (Managed release)	September 2020
С	This version is for MCS-DC 2.0.2	November 2020
D	This version is for MCS-DC 2.1	April 2021
Е	This version is for MCS-DC 2.2	September 2021
F	This version is for MCS-DC 2.3	December 2021
G	This version is for MCS-DC 2.4	March 2022
н	This version is for MCS-DC 2.5	June 2022
I	This version is for MCS-DC 2.6	October 2022
J	This version is for MCS-DC 2.7	March 2023
К	This version is for MCS-DC 2.8	September 2023
L	This version is for MCS-DC 2.9	March 2024

Updated in Revision Index B

The following table shows the updates made in this Release for version 2.0.1.

Updated Section/Sub-section		Description of Update
Section 1.2	-	Updated Support information for System 800xA
	-	Added Support information for Advant Master controllers with system 800xA HMI
	-	Added Support information for Melody Rack controllers
	-	Added Support information for Harmony Rack controllers (LCS only)
	-	Added Support information for S+ Operations HMI
	-	Added support information for Freelance HMI versions Freelance 2019 SP1 FP1 and Freelance 2013 SP1 RU5.
Section 2	-	Added Common Prerequisites
	-	Updated Prerequisites for 800xA System
	-	Added Prerequisites for S+ Operations HMI
	-	Added Prerequisites for Harmony Rack
	-	Added Prerequisites for Advant Master with 800xA System
	-	Added Prerequisites for Melody Rack

Table 3. Updated in Release version 2.0.1

Updated Section/Sub-section		Description of Update
Section 3	-	Updated Basic Mode data collection process for 800xA HMI
	-	Updated Basic Mode data collection process for Freelance HMI
	-	Added sub section for Basic Mode data collection process for S+ Operations HMI
	-	Updated Advanced Mode data collection process for 800xA HMI
	-	Updated Advanced Mode data collection process for Freelance HMI
	-	Added Support information for Symphony DIN controllers with system 800xA HMI.
	-	Added sub section for Advanced Mode data collection process for S+ Operations HMI.
	-	Added support for Security data collection in S+ Operations system.
Section 4	-	Updated Post collection procedure
Appendix	-	Added Appendix A
	-	Added Appendix B

Table 3. Updated in Release version 2.0.1

Updated in Revision Index C

The following table shows the updates made in this Release for version 2.0.2.

Updated Section/Sub-section		Description of Update
Section 2	-	Added Prerequisites for Advant MOD 300
	-	Added Prerequisites for Procontrol P13 controllers
Section 3	-	Updated Basic Mode data collection process for 800xA HMI
	-	Updated Advanced Mode data collection process for 800xA HMI
	-	Updated Advanced Mode data collection process for S+ Operations HMI
Appendix	-	Added Appendix C

Table 4. Updated in Release version 2.0.2

Updated in Revision Index D

The following table shows the updates made in this Release for version 2.1.

Updated Section/Sub-section	Description of Update
Section 2	 Added Prerequisites for QCS with 800xA HMI
Section 3	- Updated Basic Mode data collection process for 800xA HMI
	 Updated Advanced Mode data collection process for 800xA HMI
	 Updated Advanced Mode data collection process for S+ Operations HMI
Appendix	- Added Appendix D

Table 5. Updated in Release version 2.1

Updated in Revision Index E

The following table shows the updates made in this Release for version 2.2.

Updated Section/Sub-section	Description of Update
Section 1	- Supported Systems and Versions
Section 3	- Data Collection process
Section 5	- "chkdsk" issue is removed
Section 2	- Modified .Net framework version
	 Freelance prerequisite settings for Windows XP client nodes in workgroup
Section 5	- Error when .Net Framework is missing in the launch node

Table 6. Updated in Release version 2.2

Updated in Revision Index F

The following table shows the updates made in this Release for version 2.3.

Updated Section/Sub-section	Description of Update
Section 3	- Periodic Data Collection
	- All Images
	 Product name change from SPDC to MSC Data collector
Section 5	 Issue 1 Agent deployment failed added
	-

Table 7. Updated in Release version 2.3

Updated in Revision Index G

The following table shows the updates made in this Release for version 2.4.

Updated Section/Sub-section		Description of Update
Section 1.2	-	Supported Systems and Versions
Section 3.4.1	-	800xA with Harmony data collection
Section 3.4.3	-	S+ Operations with Harmony data collection
Section 3.5	-	Periodic data collection improvements
Appendix E	-	Hash verification.

Table 8. Updated in Release version 2.4

Updated in Revision Index H

The following table shows the updates made in this Release for version 2.5.

Updated Section/Sub-section		Description of Update
Section 2.13	-	Non-ABB System (Security Data collection).
Section 3.4.7	-	Security Data Collection from non-ABB Systems.
	-	Support for QCS with System 800xA HMI version 6.1 SP2.
Section 1.2	-	Supported Systems and Versions.
Section 4	-	Change in collection file name.

Table 9. Updated in Release version 2.5

Updated in Revision Index I

The following table shows the updates made in this Release for version 2.6.

Updated Section/Sub-section		Description of Update
Section 3.1	-	Switch option from Basic to Advanced mode data collection.
Section 3.3.1, Section 3.4.1	-	AC800M crash file collection configuration.
Section 3.6	-	ESXi Data Collection
Section 4.1	-	Collection file merging
Appendix B.2	-	Secured communication - Client certificate selection procedure

Table 10. Updated in Release version 2.6

Updated in Revision Index J

The following table shows the updates made in this Release for version 2.7.

Updated Section/Sub-section		Description of Update
Section 1.2	- 9999 999 1	Supported Melody versions, Supported Harmony Composer & S+ Engineering versions, Supported HAPI versions, Supported S+ Operations Versions, Supported 800xA Versions and Support for Harmony Bridge modules.

Updated in Revision Index K

The following table shows the updates made in this Release for version 2.8.

Updated Section/Sub-section		Description of Update
Section 3.1	-	Parallel data collection of client
	-	AC800M controller collection configuration.

Table 12. Updated in Release version 2.8

Updated in Revision Index L

The following table shows the updates made in this Release for version 2.9.

Updated Section/Sub-section	Description of Update
Section 1.2	- Supported Freelance versions.
Section 3.1, 3.2	- AC800M controller collection configuration.
Section 3.4.8	- S+ Historian in 800xA or third party HMI environmen
Section 4.1	- Collection file merging
Appendix B	- Secured communication.

Table 13. Updated in Release version 2.9

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