

System Certification Guide For NEMS Systems Interfaces (Version 2.5)





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1 Introduction

1.1 **Purpose and Scope**

The purpose of this document is to provide the system and user access requirements to access the market systems. The scope of the interfaces are covered as follows,

- Access to the Public Website(Self-Registered Users)
- Access to Private Website (Registered Market Participants)
- Access to the Data Services for Automation
- Secure email communications



Y/N

2 Market Systems Checklist

2.1 Access to Public Website (Self Registered Users)

Description	To allow users to access information published on the EMC Public Website.
Users	This can be accessed by any user.

Checklist

All required tasks or actions to be completed by the user prior to this test

All required tasks of actions to be completed by the user phor to this test	
End User System Requirement	
Is your PC installed with Windows Operating System (Windows 10 or latest)?	
Is your PC equipped with internet access?	
Are you using the below mention web browser?	
Internet Explorer (version 11 and above)	
User Access Requirement	
Have you registered an account at EMC corporate website to access the Public section?	
https://www.emcsg.com (Click on "Register/Log in" button)	

Test Steps		Y/N	
The main	The main steps for this particular test		
1	Can the user access the EMC corporate website: <u>https://www.emcsg.com</u> from the configured PC?		
2	Are you able to logon successfully? If you have a registered account with EMC, you can logon to the "Log In" page after clicking the "Register/Login" button.		



2.2 Access to Private Website (Registered market participants)

Description	To allow registered market participants to access information published on the EMC Private Website.
Users	This can only be accessed by Registered market participants.

Checklist	Y/N
All required tasks or actions to be completed by the user prior to this test	
End User System Requirement	
Is your PC installed with Windows Operating System (Windows 10 or latest)?	
Is your PC equipped with internet access?	
Are you using the below mention web browser:	
Internet Explorer (version 11 and above)	
User Access Requirement (Publications)	
Have you registered an account at EMC corporate website?	
https://www.emcsg.com (Click on "Register/Log in" button)	
Have you submitted the NEMS System Administration Form to EMC?	
The NEMS System Administration Form is available at	
https://www.emcsg.com/aboutthemarket/marketsystems (Only applicable to	
registered market participants with EMC)	_
User Access Requirement (SEW Trading Portal)	
Have you registered an account at EMC corporate website?	
https://www.emcsg.com (Click on "Register/Log in" button)	
Have you submitted the NEMS System Administration Form to EMC?	
If not, the form is available at	
https://www.emcsg.com/aboutthemarket/marketsystems (Only applicable to	
registered market participants with EMC)	
Have you received the RSA token from EMC?	



Test Steps (Publications) The main steps for this particular test		Y/N
1	Can the user access the EMC corporate website: https://www.emcsg.com from the configured PC?	
2	Are you able to logon successfully? If you have registered account with EMC, you can logon to the "Log In" page after clicking the "Register/Login" button.	
3	Can the user access the following tabs: <u>https://www.emcsg.com</u> 1. Secure area 2. Publications	

Test Steps (SEW Trading Portal) Y The main steps for this particular test Y		Y/N
1	Can the user access the EMC corporate website: https://www.emcsg.com from the configured PC?	
2	Are you able to logon successfully? If you have registered account with EMC, you can logon to the "Log In" page after clicking the "Register/Login" button.	
3	Can the user access the Trading Information tab: <u>https://www.emcsg.com</u> 1. Login with User id and password 2. Click on Secure area 3. Under Secure area click on Trading Information	
4	Can the user access the following tabs: <u>https://www.emcsg.com</u> . 1. Market Clearing Report 2. Settlement Report 3. Advisories	
5	Can the user access the Submissions tab: <u>https://www.emcsg.com</u> . 1. Login with User id and password 2. Enter the Token number 3. Under Secure area click on the Submissions tab 4. Click to launch manually	
6	Can the user access the Publications tabs: <u>https://www.emcsg.com</u> : 1. Login with User id and password 2. Under Secure area click on the Publications tab	
7	Can the user access the following under the Publications tabs: <u>https://www.emcsg.com</u> : 1. Pricing and information 2. Settlement and Ancillary Services 3. Market Systems 4. Power System Operator (PSO) Data	



Y/N

2.3 Access to Data Services for Automation

Description	To allow registered market participant's System to access Web services.
Users	This can only be accessed by registered market participants.

Checklist

All required tasks or actions to be completed by the market participant prior to this test

End User System Requirement

Is your PC or Server equipped with internet access?

User Access Requirement

Have you submitted the NEMS System Administration Form to EMC?

If not, the form is available at :

<u>https://www.emcsg.com/aboutthemarket/marketsystems</u> (Only applicable to registered market participants with EMC)

Are you issued with the logon system id and password by EMC?

Have you submitted your company Public IP to EMC?

Have you purchased a SSL client certificate with 2048bits which is issued by trusted Certificate Authority?

Have you provided EMC the root CA certificate (*.cer file) from the client SSL certificate that you have purchased to ensure it is added into the CA trusted list at EMC Web server for the Web services interfaces?

Test Steps	Y/N
The main steps for this particular test	171
For Web services calls, it will require programming language used by MP to automate the web service parameters. Refer to details of all parameters for "Data Service Specifications Guide" which is available at: https://www.emcsg.com/securearea/publications/marketsystems	



Y/N

2.4 Secure Email Communication

Description	To confirm that market participants are able to submit backup offers to the NEMS systems and send files to EMC Market Operations team through secure email communications.
Users	This can only be performed by Registered market participants.

Checklist

All required tasks or actions to be completed by the market participant prior to this test

End User System Requirement

Is your PC installed with Windows Operating System (Windows 10 or latest)?

Is your PC equipped with internet access?

Is your PC installed with Microsoft Outlook?

User Access Requirement For Backup Offers to helpdesk@emcsg.com

Do you have EMC helpdesk public key certificate? (*.cer file)?

Have you configured your E-mail Client for sending secure e-mails to <u>helpdesk@emcsg.com</u> (as per the following installation instructions in Appendix A)?

User Access Requirements For Sending Files to settdata@emcsg.com

Do you have EMC Settdata Account public key certificate? (*.cer file)?

Have you configured your E-mail Client for sending secure e-mails to <u>settdata@emcsg.com</u> (as per the following installation instructions in Appendix A)?



Test Steps The main steps for this particular test		Y/N
1	Are you able to send an encrypted e-mail to the EMC <u>helpdesk@emcsg.com</u> account (containing a correctly formatted offer file)?	
2	Are you able to send an encrypted and signed e-mail to the EMC settdata@emcsg.com account	



Appendix A – Setup Secure Email

Set up EMC Helpdesk contact

To be able to send secure e-mails to EMC helpdesk, a contact must be set up in Outlook with an associated digital certificate.

Create a new contact for: <u>helpdesk@emcsg.com</u>

El ∽ ◯ ↑ ↓ & ~ ≂ EMC Helpdesk - Contact	• -	
File Contact Insert Draw Format Text Review Developer Help Q Tell me what you want to do		
Save & Delete Save & Forward OneNote New * * * * * * * * * * * * * * * * * * *	e Update	Zoom
Actions Show Communicate Names Options Tags	Update	Zoom 🔨
Outlook will use one of these certificates to send encrypted mail to this contact. You can get a certificate by receiving digitally signed mail from this contact or by importing a certificate file for this contact.		
Certificates (Digital IDs)		
		<u>P</u> roperties Set as <u>D</u> efault
		Import
		<u>E</u> xport
		<u>R</u> emove

Click on the Certificates tab. Click on [Import]



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Actions		Show	Communicate	Names	Options	Tags		Update	Zoom	^
	e certificates to send encrypte receiving digitally signed mail		porting a certificate file for thi	s contact.						
<u>C</u> ertificates (Digital IDs)										
									<u>P</u> ropertie	
	Locate Certificate							×	Set as <u>D</u> ef	_
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		^ Name	^	Date modif	ïed	Туре	Size			
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	Desktop									
	Documents									
	Downloads Music									
	Pictures									
	Videos									
	😍 Windows (C:)	~								
	Fil	e name: EMCHelpdesk	cer		~	Digital ID Files (*.p7	cr*.cer) >			
					Tools 🔻	Open	Cancel			
					TOOIS	Open	Cancer			

Select the *.cer file that was emailed by EMC (the Public certificate).

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File Contact Insert Draw	Format Text Review	Developer Help	💡 Tell me w	hat you want to c	lo		
Save & Delete Save & Forward OneNote Close New ~ ~	General Details	Email Meeting More	Address Check Book Names	Business Picture Card ~	Categorize Follow Private	≗ Update	Zoom
Actions	Show	Communicate	Names	Options	Tags	Update	Zoom ^
Outlook will use one of these certificates to send e You can get a certificate by receiving digitally sign		nporting a certificate file for thi	s contact.				
Certificates (Digital IDs)							
EMC Helpdesk(Default)							Properties
							Set as <u>D</u> efault
							I <u>m</u> port
							Export Remove
							Temove
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You should now see a certificate displayed for this contact.

Click on [Save & Close].



Send an Encrypted Email

Once the contact is created with the associated digital certificate, sending an encrypted email is straightforward.

Create a New E-mail Message to the contact created with associated digital certificate i.e. <u>helpdesk@emcsg.com</u>

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File M	essage Inser	t Draw Options F	ormat Text	Review De	veloper Help	Q T€	ell me what you w	ant to do				
Paste		- <u>11</u> → A [*] A [*] Ξ → } 2 → <u>A</u> → Ξ Ξ Ξ Ε	Ac	Aldress Check look Names	 Q Attach File ∽ P Attach Item ~ M Signature ∽ 	Assign Policy ~	 Follow Up ~ High Importance Low Importance 	Dictate	Sensitivity	Insights	View Templates	
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\triangleright	From 🗸	helpdesk@emcsg.com										
Send	То	O EMC Helpdesk;										
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Thank you.												
Regards, EMC Helpde Phone: +65 E-mail: belo		om										
c mail. <u>neip</u>	desk@emesg.e	<u></u>										
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Once you are ready to send the message; click on [Option], follow by [Encrypt-Only]. Click [Send] to send the e-mail.

	2 🔶 🗸 🖇		Testing Encrypted Email - 1	Message (HTML)			PX)
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The	emes	Show Fields	Set permission on this item	۲ <u>م</u>	More Options 15	i	^
		is encrypted. Recipients ne.Seah@emcsg.com	✓ Encrypt-Only				
	From 🗸	helpdesk@emcsg.co	Do Not Forward				
\triangleright		neipuesk@emcsg.co	Confidential \ All Employees				
<u>S</u> end	Īo	O EMC Helpdesk;	Highly Confidential \ All Employees				
	<u>C</u> c						
	S <u>u</u> bject	Testing Encrypted E	mail				
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Thank you. Regards, EMC Helpde Phone: +65 6 E-mail: <u>helpc</u>		<u>əm</u>					
•							•



To change/replace the Helpdesk Certificate

Go to the outlook contacts.

Double click on the Helpdesk contact.

$\blacksquare \mathrel{\vartriangleright} \mathrel{\triangleleft} \land \uparrow \checkmark \circledast \mathrel{\cdot}$		EMC Helpdesk	: - Contact 🔍			• -	
File Contact Insert D	raw Format Text Review	Developer Help	♀ Tell me w	hat you want to d	0		
Save & Delete Save & Forward One Close New ~ ~	Note A = Details General Certificates A II Fields	Email Meeting More	Address Check Book Names	Business Picture Card ×	Categorize Follow Priv	vate Update	Zoom
Actions	Show	Communicate	Names	Options	Tags	Update	Zoom ^
Full Name Company Job title File as EMC Helpdesk Internet				EMC Helpde			
Email	mcsg.com						
Display as EMC Helpdesk	(helpdesk@emcsg.com)	Notes					
Web page address IM address Phone numbers Business Home Business Fax Addresse Business This is the mailing address			. 1	. 2	3	5 .	
		•					•



Click on the certificates.

File Contact Insert Draw Format Text Review Developer Help Tell me what you want to do Image: Space & Delete Save & Forward OneNote Image: Space & Delete Save & Delete Save & Forward OneNote Image: Space & Delete Save & D	
Control Save & Delete Save & Convard OneNote General General Email Meeting More Address Check Business Fill Categorize Follow Private Up date Control Address Communicate Names Options Tags Update Outlook will use one of these certificates to send encrypted mail to this contact. You can get a certificate by receiving digitally signed mail from this contact or by importing a certificate file for this contact. Vou can get a certificate (Digital IDs) EMC Helpdesk(Default) EMC Helpdesk(Default) EMC Helpdesk(Default) EMC Helpdesk(Default)	
Outlook will use one of these certificates to send encrypted mail to this contact. You can get a certificate by receiving digitally signed mail from this contact or by importing a certificate file for this contact. Certificates (Digital IDs) EMC Helpdesk(Default)	Zoom
You can get a certificate by receiving digitally signed mail from this contact or by importing a certificate file for this contact. Certificates (Digital IDs) EMC Helpdesk/Default)	Zoom /
Certificates (Digital IDs) EMC Helpdesk(Default)	
EMC Helpdesk(Default)	
	Properties
	Set as Default
	Import
	Export
	Remove

Click on [Remove] to remove the existing certificate.

⊟ ७ ७ ↑ ↓ % · ⊽		EMC Helpdesk	- Contact				
File Contact Insert Draw	Format Text Review	Developer Help	Q Tell me w	hat you want to d	lo		
Save & Delete Save & Forward OneNote Close New *	General General Details Certificates All Fields	Email Meeting More	Address Check Book Names	Business Picture Card ×	Categorize Follow Private	<mark>≗</mark> Update	Q Zoom
Actions	Show	Communicate	Names	Options	Tags	Update	Zoom 🔨
Outlook will use one of these certificates to send en You can get a certificate by receiving digitally signed		nporting a certificate file for thi	s contact.				
Certificates (Digital IDs)							
							Properties
							Set as Default
							Export
							Remove



To associate the contact with the new certificate, click on [Import] and select the *.cer file that was e-mailed by EMC (the Public certificate).

⊟ 9 ७ ↑ ↓ ®	EMC Helpdesk	- Contact	X X X X X X X X X X X X X X X X X X X	•	
File Contact Insert Draw Format Text	Review Developer Help	Q Tell me what you wan	t to do		
Save & Delete Save & Forward OneNote General β	Certificates Certificates All Fields	Address Check Book Names	Categorize Follow Pr	rivate Update	Zoom
Actions Sho	w Communicate	Names Options	Tags	Update	Zoom 🔨
Outlook will use one of these certificates to send encrypted mail to You can get a certificate by receiving digitally signed mail from this		contact.			
Certificates (Digital IDs)					
				_	<u>P</u> roperties
Locate Certificate				×	Set as <u>D</u> efault
\leftarrow \rightarrow \checkmark \uparrow] \triangleright This P	C > Desktop > EMC Helpdesk	ٽ ~	Search EMC Helpdes	sk	I <u>m</u> port
					<u>E</u> xport
Organize Vew folder	~				<u>R</u> emove
Itis PC	Name	Date modified	Type Size		
3D Objects	EMCHelpdesk.cer	19-Feb-21 10:56 AM	Security Certificate	2 KB	
E Desktop					
Documents					
Downloads					
Music					
Pictures					
Videos					
😂 Windows (C:) 🗸					
File name:	EMCHelpdesk.cer	~	Digital ID Files (*.p7c;*.cer)) ~	
		Tools 🔻	Open Car	ncel	

Select [Save & Close], then send the test email.