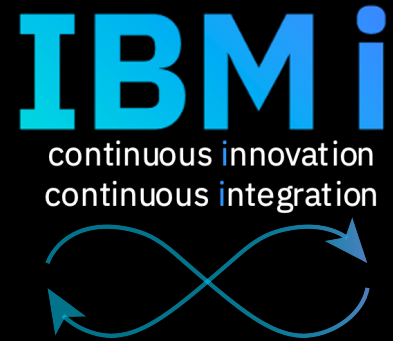


Navigator for i

TLS Things

Tim Rowe – timmr@us.ibm.com

STSM – IBM i Business Architect

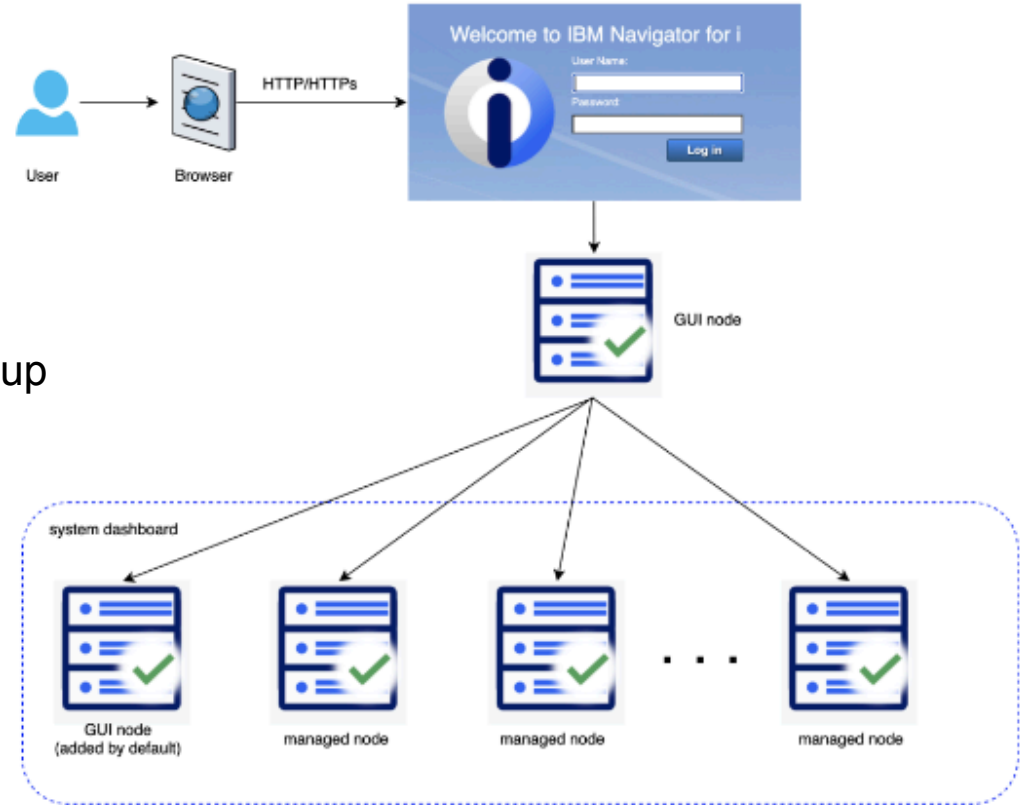


GUI node

- Latest PTFs installed
- Runs in ADMIN1 server

Endpoint nodes

- Do not need ADMIN1 running
- Do not need the latest PTFs
- Recommend the Database PTF group



Function Usage

- Shipped Secure by Default
- Granular today by high level category
- Easy to add new users and Groups to a function usage category

IBM Navigator for i

Function Usage

Actions

Function ID	Function Name	Default Usage	All Object Indicator	Profiles Allowed / Denied	Category	Product ID	Group ID	Description
QIBM_N	Filter	Filter	Filter	Filter	Filter	Filter	Filter	Filter
QIBM_NAV_WRK_MGT	WORK MANAGEMENT	ALLOWED	USED	NO	Navigator for i	QIBM_NAV	*NONE	WORK MANAGEMENT
QIBM_NAV_CONF_SRV	CONFIGURATION AND SERVICE	ALLOWED	USED	NO	Navigator for i	QIBM_NAV	*NONE	CONFIGURATION AND SERVICE
QIBM_NAV_SYSTEM	SYSTEM	ALLOWED	USED	NO	Navigator for i	QIBM_NAV	*NONE	SYSTEM
QIBM_NAV_MONITORS	MONITORS	ALLOWED	USED	NO	Navigator for i	QIBM_NAV	*NONE	MONITORS
QIBM_NAV_NETWORK	NETWORK	ALLOWED	USED	NO	Navigator for i	QIBM_NAV	*NONE	NETWORK
QIBM_NAV_SECURITY	SECURITY	ALLOWED	USED	NO	Navigator for i	QIBM_NAV	*NONE	SECURITY
QIBM_NAV_USERS_GROUPS	USERS AND GROUPS	ALLOWED	USED	NO	Navigator for i	QIBM_NAV	*NONE	USERS AND GROUPS
	MANANCE	ALLOWED	USED	NO	Navigator for i	QIBM_NAV	*NONE	PERFORMANCE
	EM	ALLOWED	USED	NO	Navigator for i	QIBM_NAV	*NONE	FILE SYSTEM
	BILITY	DENIED	USED	NO	Navigator for i	QIBM_NAV	*NONE	SERVICEABILITY
	CHARTS	ALLOWED	USED	NO	Navigator for i	QIBM_NAV	*NONE	CUSTOM CHARTS
	IBM NAVIGATOR	USED	NO	Navigator for i	QIBM_NAV	*NONE	*NONE	USE OF IBM NAVIGATOR FOR I FUNCTIONS

Filtered Rows: 12 | Total Rows: 59

Security

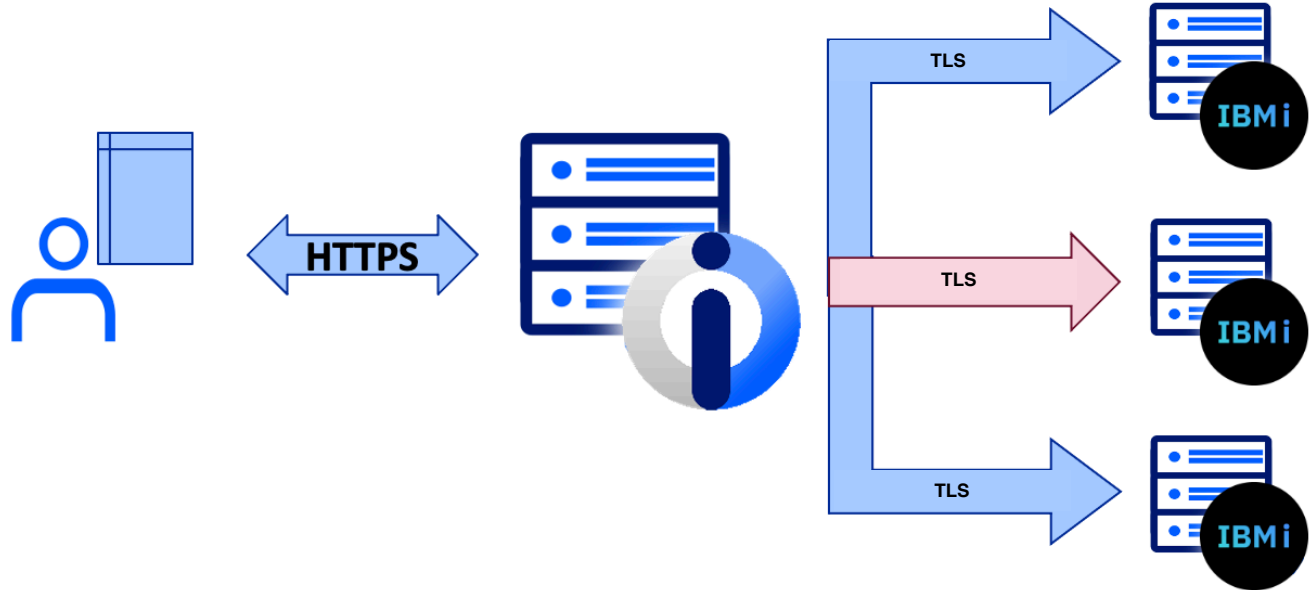
- Security Configuration Info
- Audit Journal Entries
- Authority Collection
- Authorization Lists
- Function Usage
- Network Authentication Service
- Enterprise Identity Mapping (EIM)
- IBM Digital Certificate Manager for i

Work with function usage, also known as the Application Administration support in the past.

TLS

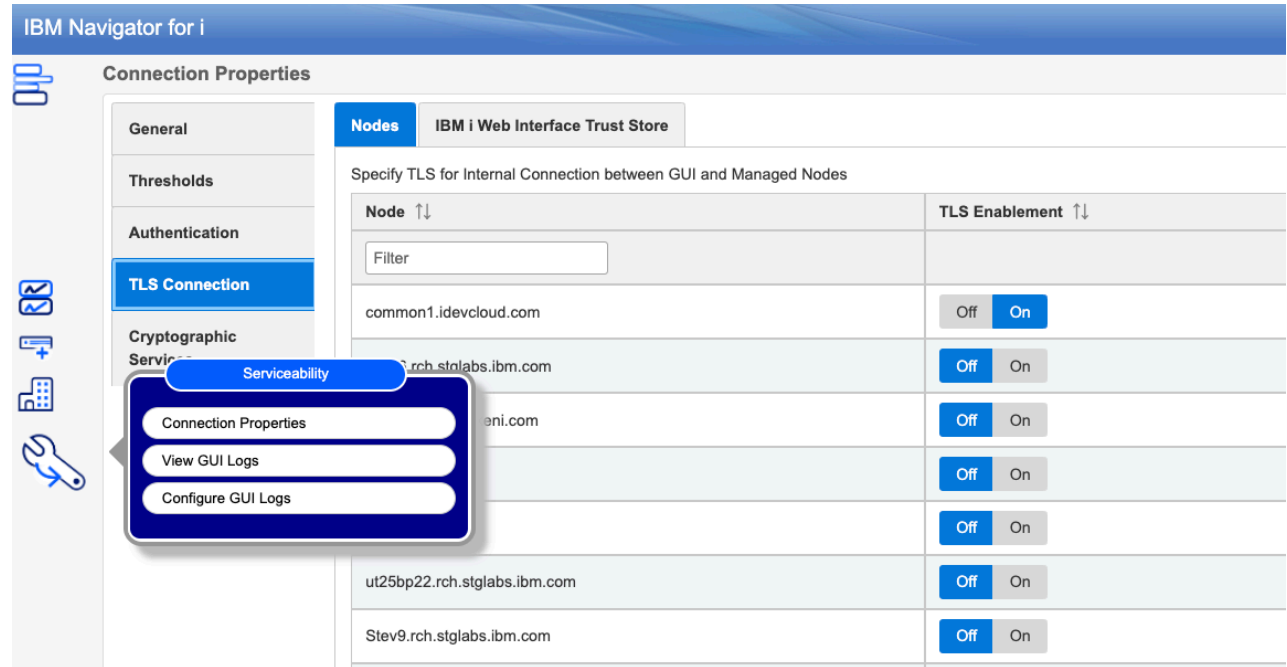
TLS can be configured in 2 places:

- From Browser to the GUI Node
- From the GUI Node to each IBM i endpoint node



TLS Between the GUI Node and an IBM i Endpoint Node

1. Go to Serviceability -> Connection Properties
2. Click on the TLS Connection tab
3. Under the TLS Enablement column, select 'On'



IBM Navigator for i

Connection Properties

Nodes IBM i Web Interface Trust Store

Specify TLS for Internal Connection between GUI and Managed Nodes

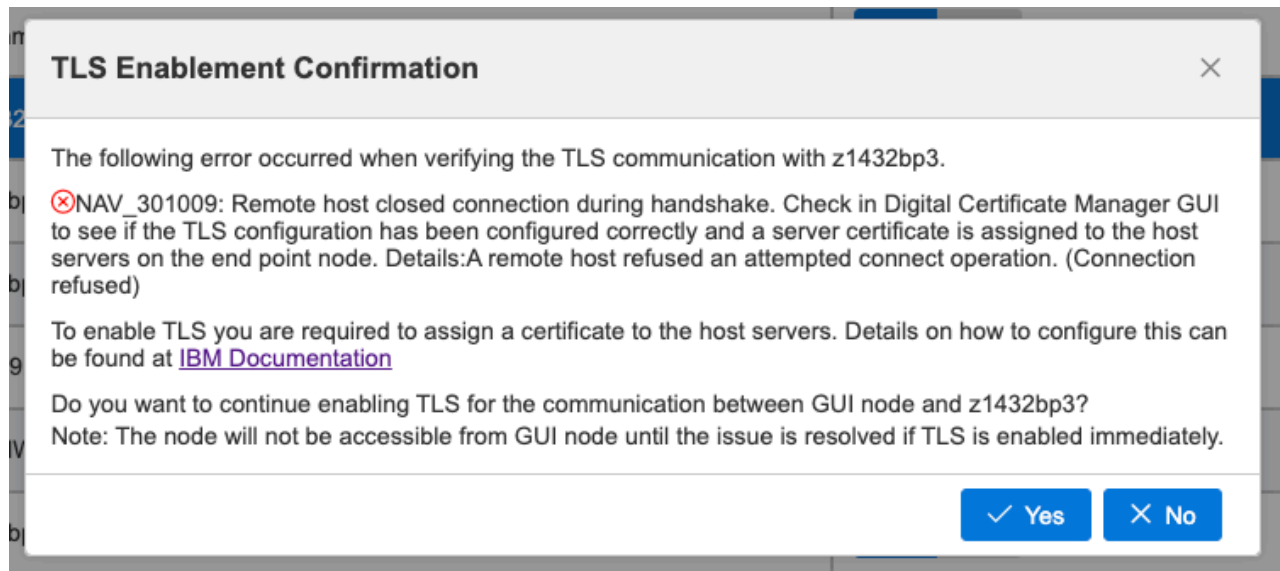
Node ↑↓	TLS Enablement ↑↓
Filter	
common1.idevcloud.com	Off On
rch.stglabs.ibm.com	Off On
eni.com	Off On
	Off On
ut25bp22.rch.stglabs.ibm.com	Off On
Stev9.rch.stglabs.ibm.com	Off On

Serviceability

- Connection Properties
- View GUI Logs
- Configure GUI Logs

TLS Between the GUI Node and an IBM i Endpoint Node


1. Configure the Host servers on each endpoint node for TLS: <https://www.ibm.com/docs/en/i/7.4?topic=servers-setting-up-i-use-ssl#sslreq>
2. Click Yes



TLS Between the GUI Node and an IBM i Endpoint Node

3. The GUI will retrieve the certificate from the IBM i end-point node
4. Click Close to have this certificate installed into the Web Certificate store
5. The connection from the GUI to the endpoint node is secured with TLS!

TLS Information ✕

 TLS Environment Active

Protocol: TLSv1.2
Cipher Suite: SSL_ECDHE_RSA_WITH_AES_128_GCM_SHA256

Certificate Information:

Server Certificate	Issuer Certificate
<p>Subject: CN=ut25bp22_hostsvr_cert, OU=IBM, O=IBM, L=BJ, ST=BJBJ, C=CN Issuer: CN=ut25bp22 Local CA, O=CSL IBMi team, L=Beijing, ST=Beijing, C=CN Serial Number: 27717360690203008 Certificate Type: X.509 Version: 3 Signature Algorithm: SHA256withRSA Validity Period: May 8, 2022 3:03:58 AM - May 9, 2023 3:03:58 AM Public Key Algorithm: RSA Public Key Format: X.509 Public Key Length: 2048 Public Key: 30 82 01 22 30 0d 06 09 2a 86 48 86 f7 0d 01 01 01 05 00 03 82 01 0f 00 30 82 01 0a 02 82 01 01 00 c4 ae 08 bc 79 a6 f6 0c 6c 6e 04 b6 a5 01 6c 7b c1 70 18 d2 84 07 20 2d ea 2d 27 f7 48 87 a9 90 a4 bd 40 89 f8 9e cd ff d7 7f e7 4c b8 cc 96 5f d7 82 df a2 17 f1 05 35 b2 38 bb 5b 90 50 5d 50 6d 32 ec e5 8e 74 07 36 9a e0 51 05 b9 2b 76 6b c9 ee 10 5c 4d 7f 43 3e 49 b6 ab 6a 9d fd c5 41 4f 94 84 74 77 18 85 c5 b9 49 e6 1a c2 a3 a4 89 89 c9 78 cf 73 80 1e 2a 74 9a 46 96 2e 96 a6 e5 56 5b dd 82 7a 28 37 3d a9 ab 7a ce ec ec 9f 21 ca 27 58 b8 2a 45 f5 21 5d f6 4e 67 2e 4c 47 4a 39 ef 55 d2 5a 58 cf 02 19 95 a4 0c 96 5f b3 6d 41 e6 d9 40 57 63 1b 88 36 7e 33 62 38 81 78 3e 09 4d 85 28 77 ab 77 21 bc 9e d3 fb fa 51 39 f6 60 8c 33 a1 cf 5a e6 3f 6d 65 2e a2 58 28 9d d8 3c 36 49 1a 61 3e d6 39 35 83 34 25 67 b8 c6 60 59 fb ab c3 39 60 e9 0a b8 07 6d 02 d7 41 95 02 03 01 00 01</p> <p>Signature: 5b 86 85 b9 93 b9 b6 e8 0d f6 70 8c 01 c9 f4 25 e4 97 3b 27 24 57 50 5e 1a 90 e4 ab e2 3b a3 a7 fb e0 08 9c 0e 1a 1b a0 66 3d 93 91 c7 f5 62 01 2d 57 28 e2 22 f9 c2 23 cc 51 b1 63 c0 0b 41 29 66 2d e1 35 bc c4 63 b2 cb ad 0e 32 c7 b8 b5 38 cc dd eb 7c 1b e1 35 c9 8e 58 41 87 f5 57 83 45 b2 fa 16 fe 9c 7a d7 c3 ff d6 7f 66 6e db b7 33 05 5a 99 41 0b db c6 f4 a3 bc 42 55 ea bf a6 6e f6 c5 25 52 47 05 18 dd fc d8 fd 6d c7 bc 47 a2 89 40 da 5b 6b ba c3 b5 1a 7c 89 1b a8 d9 3a 96 89 6b 14 11 75 a3 3f 87 79 36 ff 1e 33 12 a7 0b 8d e5 71 04 05 2e 20 29 43 5d 88 86 9f c9 9e e8 f4 39 4a 16 aa bf 6c 0d 97 4b bb f4 98 8d 5f 4b 97 d9 7c 3d 5a ac e8 b8 25 ef 14 13 2e 95 20 b8 63 cf 93 32 7b 2a 2c 10 41 8c c8 d4 2d cc c6 cf ba 17 71 8c bd ec aa 47 5b 1e 6c 4f fb 6b 2d f3</p>	

✕ Close

TLS Between the GUI Node and an IBM i Endpoint Node

Lock Icon will appear once the connection is established with TLS

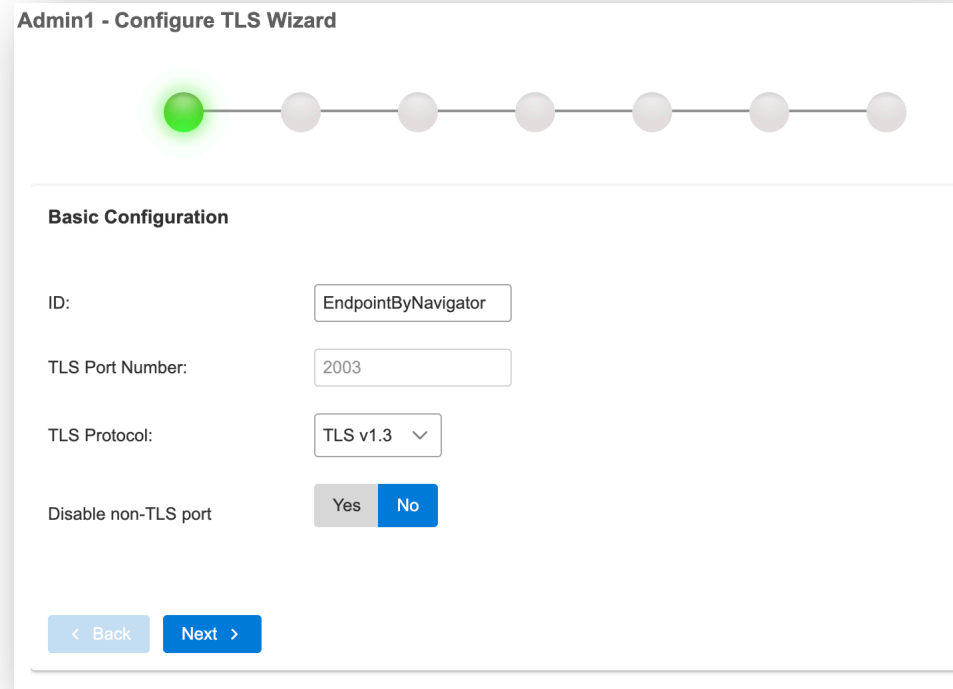
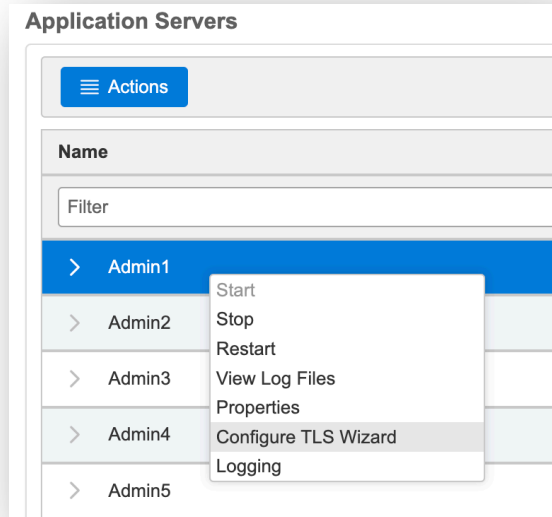
The screenshot shows the IBM Navigator for i dashboard with four system status cards. The 'common1 - Active' card is highlighted with a blue border and has a red arrow pointing to a lock icon. The 'z1432bp3 - Unknown' card is highlighted with a green border. The 'ut25bp22 - Active' card is highlighted with a grey border. The 'sync6 - Unknown' card is also visible.

System Name	Status	CPU	Active jobs	System ASP %
common1	Active	0.51	425	55.08
sync6	Unknown			
z1432bp3	Unknown			
ut25bp22	Active	11.09	872	81.44

TLS Between the Browser and the GUI Node

Or use Navigator! 😊

1. Go to Network -> Web Administration -> Application Servers
2. Right click on Admin1
3. Click on Configure TLS Wizard



Migrating old web admin functions into a new modern interface:

- Work with HTTP servers
 - View log files
 - Configure TLS
- Work with certificate stores

Application Servers

Actions


Name	Status
Admin1	Started

ID	TLS Enabled	TLS Port
defaultHttpEndpoint	No	Disabled
HttpEndpointByWebAdmin	Yes	2003

Total Rows: 2

Name	Status	Server
Admin2	Started	IBM ADMIN Server
Admin3	Started	IBM ADMIN Server

Admin1 - Configure TLS Wizard



Basic Configuration

ID:

TLS Port Number:

TLS Protocol:

Disable non-TLS port:



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