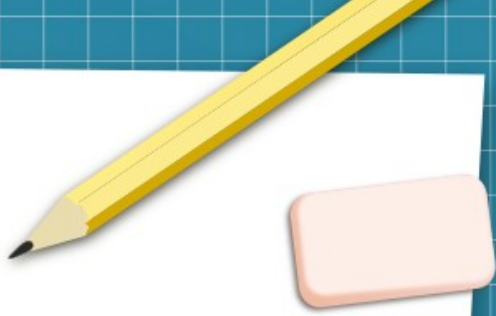


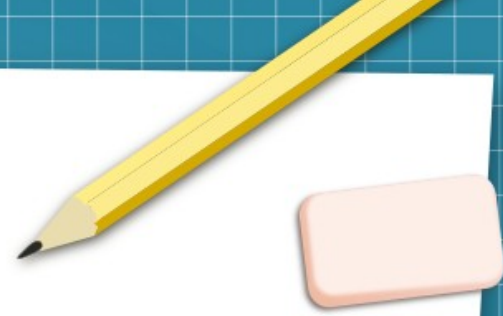
Gestion des Webservices sur IBMi



A yellow pencil and a pink eraser are positioned in the top right corner of the white paper, suggesting a drawing or writing activity.

Pourquoi un nouvel outil ?

Pourquoi ?

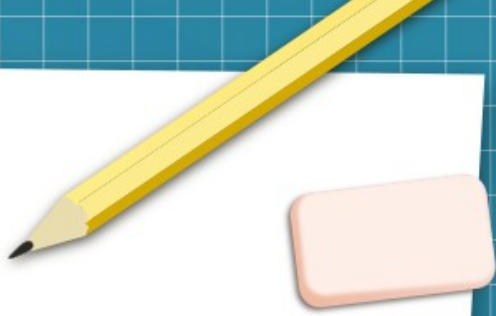


L'idée de base

- Déployer un webservice existant sur une autre machine

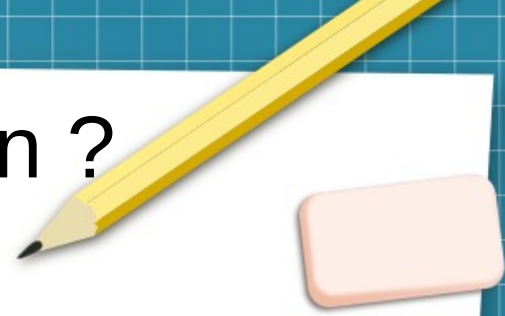
Ensuite

- Avoir une interface plus « moderne »



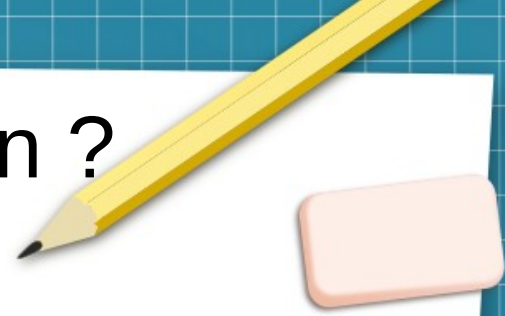
Pourquoi le mettre à disposition ?

Pourquoi le mettre à disposition ?



Pourquoi pas !?

Pourquoi le mettre à disposition ?



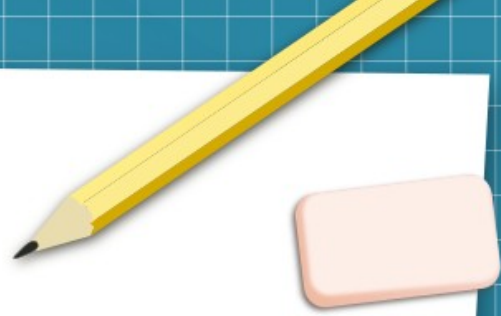
Nous avons tous les mêmes
problématiques,
les mêmes besoins !

Si personne ne donne,
personne ne reçoit !

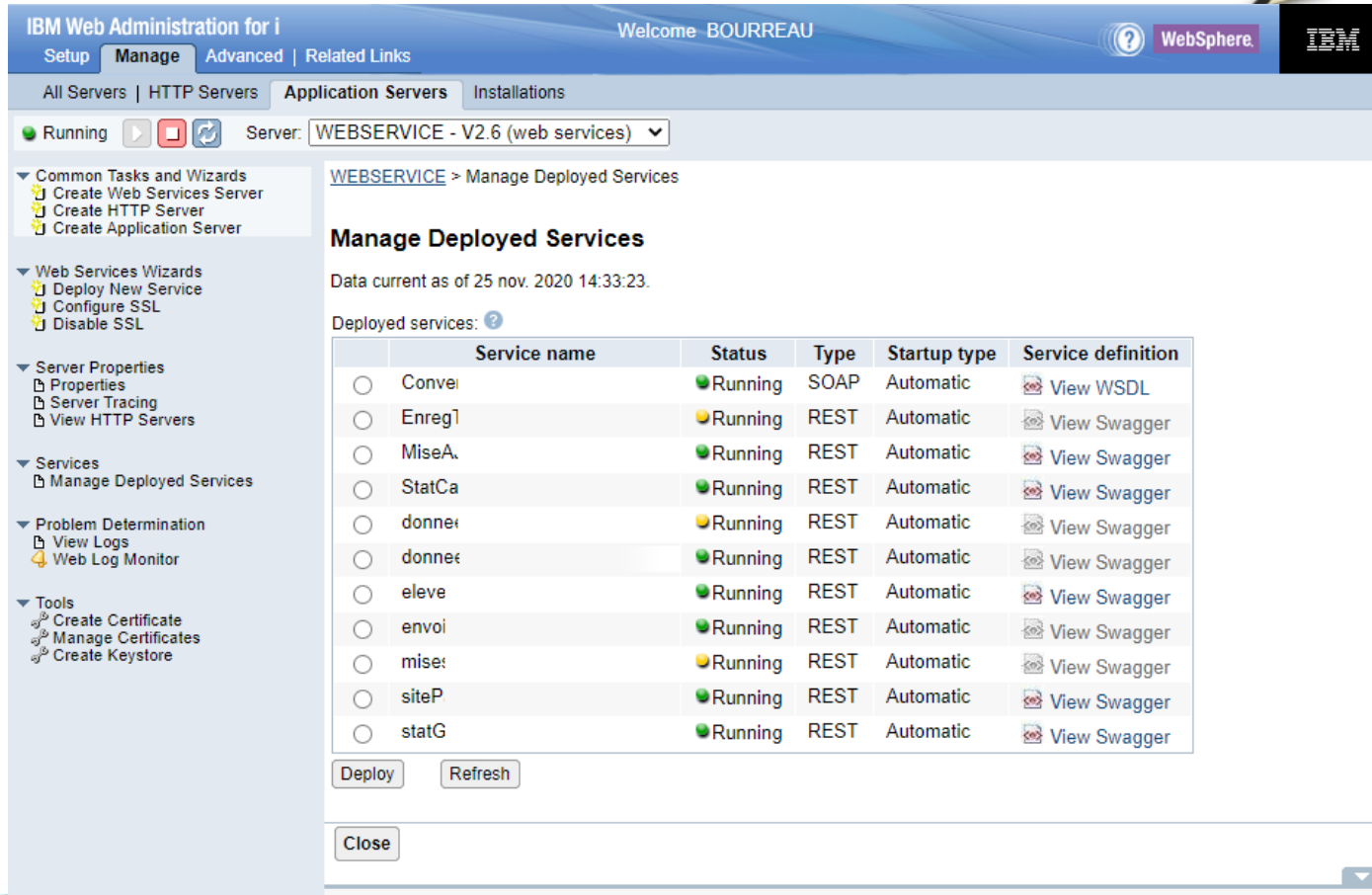
“ Tout seul on va plus vite, ensemble, on va plus loin.

Le proverbe en Afrique -
Proverbe africain

Déploiement d'un webservice sur l'IBMi



Déploiement d'un webservice sur l'IBMi



IBM Web Administration for i

Welcome - BOURREAU

Setup **Manage** Advanced | Related Links

All Servers | HTTP Servers **Application Servers** Installations

Running    Server: WEBSERVICE - V2.6 (web services) ▼

Common Tasks and Wizards

- Create Web Services Server
- Create HTTP Server
- Create Application Server

Web Services Wizards

- Deploy New Service
- Configure SSL
- Disable SSL

Server Properties

- Properties
- Server Tracing
- View HTTP Servers

Services

- Manage Deployed Services

Problem Determination

- View Logs
- Web Log Monitor

Tools

- Create Certificate
- Manage Certificates
- Create Keystore

[WEBSERVICE](#) > Manage Deployed Services

Manage Deployed Services

Data current as of 25 nov. 2020 14:33:23.

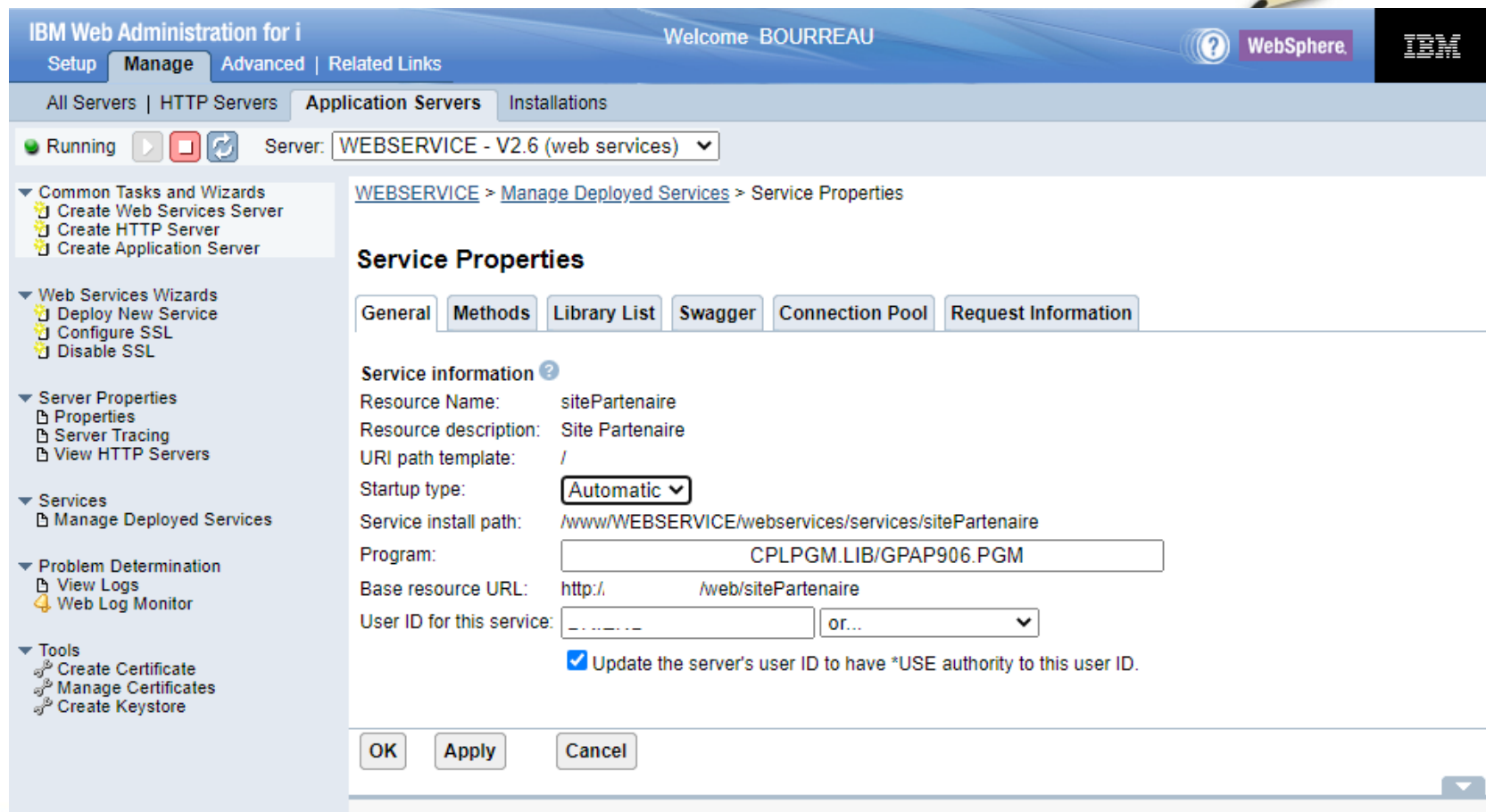
Deployed services: ?

	Service name	Status	Type	Startup type	Service definition
☐	Convei	Running	SOAP	Automatic	 View WSDL
☐	Enregl	Running	REST	Automatic	 View Swagger
☐	MiseA.	Running	REST	Automatic	 View Swagger
☐	StatCa	Running	REST	Automatic	 View Swagger
☐	donnei	Running	REST	Automatic	 View Swagger
☐	donnei	Running	REST	Automatic	 View Swagger
☐	eleve	Running	REST	Automatic	 View Swagger
☐	envoi	Running	REST	Automatic	 View Swagger
☐	mise:	Running	REST	Automatic	 View Swagger
☐	siteP	Running	REST	Automatic	 View Swagger
☐	statG	Running	REST	Automatic	 View Swagger

Deploy Refresh

Close

Déploiement d'un webservice sur l'IBMi



IBM Web Administration for i

Welcome BOURREAU

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All Servers | HTTP Servers Application Servers Installations

Running [Stop] [Refresh] Server: WEBSERVICE - V2.6 (web services) ▼

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WEBSERVICE > Manage Deployed Services > Service Properties

Service Properties

General Methods Library List Swagger Connection Pool Request Information

Service information ?

Resource Name: sitePartenaire

Resource description: Site Partenaire

URI path template: /

Startup type: Automatic ▼

Service install path: /www/WEBSERVICE/webservices/services/sitePartenaire

Program: CPLPGM.LIB/GPAP906.PGM

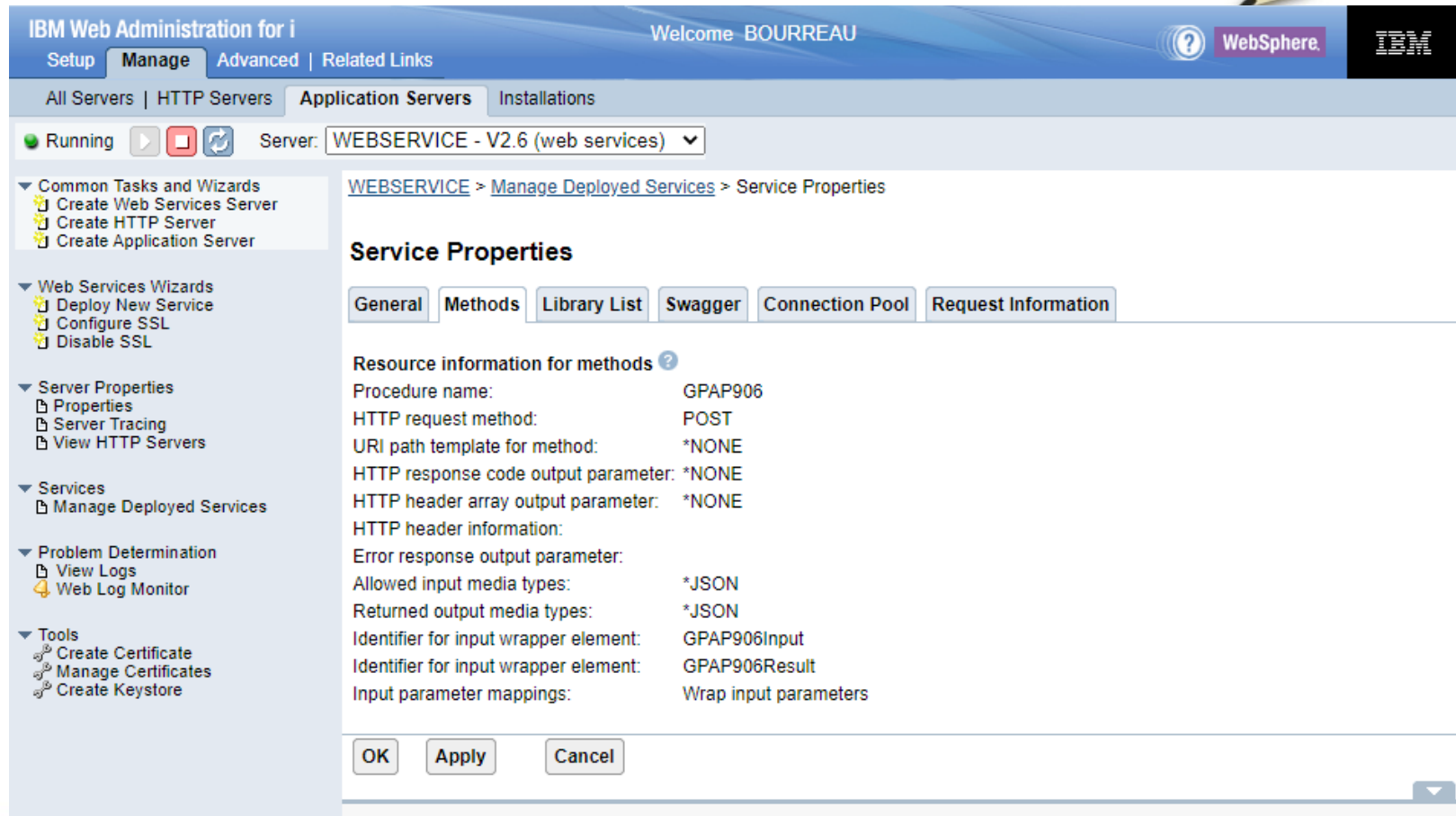
Base resource URL: http:// /web/sitePartenaire

User ID for this service: [] or... ▼

☒ Update the server's user ID to have *USE authority to this user ID.

OK Apply Cancel

Déploiement d'un webservice sur l'IBMi



IBM Web Administration for i

Welcome BOURREAU

Setup Manage Advanced Related Links

All Servers HTTP Servers Application Servers Installations

Running Server: WEBSERVICE - V2.6 (web services)

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WEBSERVICE > Manage Deployed Services > Service Properties

Service Properties

General Methods Library List Swagger Connection Pool Request Information

Resource information for methods ?

Procedure name:	GPAP906
HTTP request method:	POST
URI path template for method:	*NONE
HTTP response code output parameter:	*NONE
HTTP header array output parameter:	*NONE
HTTP header information:	
Error response output parameter:	
Allowed input media types:	*JSON
Returned output media types:	*JSON
Identifier for input wrapper element:	GPAP906Input
Identifier for input wrapper element:	GPAP906Result
Input parameter mappings:	Wrap input parameters

OK Apply Cancel

Déploiement d'un webservice sur l'IBMi

IBM Web Administration for i

Welcome BOURREAU

Setup **Manage** Advanced | Related Links

All Servers | HTTP Servers **Application Servers** Installations

Running Server: WEBSERVICE - V2.6 (web services)

Service Properties

General **Methods** Library List **Swagger** Connection Pool Request Information

Specify library list position for this Web service:

☐ Insert libraries in front of user library portion of the library list

☒ Insert libraries at the end of user library portion of the library list

Library list entries for "GPAP906.PGM":

	Library name
☐	/S.LIB/CPLPGM.LIB
☐	/S.LIB/COPERL.LIB

Add Remove All

OK Apply Cancel

Déploiement d'un webservice sur l'IBMi



IBM Web Administration for i

Welcome BOURREAU

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▼ Problem Determination

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- Web Log Monitor

▼ Tools

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[WEBSERVICE](#) > [Manage Deployed Services](#) > Service Properties

Service Properties

General **Methods** Library List Swagger Connection Pool Request Information

Connection pool information ?

Host server: localhost

Use secure connections: No ▼

Maximum number of connections: *NOMAX or... ▼

Maximum connection use count: *NOMAX or... ▼

Maximum connection use time (seconds): *NOMAX or... ▼

Maximum connection inactivity (seconds): 3600 or... ▼

Maximum lifetime (seconds): 86400 or... ▼

Connection pool fill count: 1 or... ▼

Connection CCSID: *USERID or... ▼

Cleanup interval (seconds): 300

Use maintenance threads: Yes ▼

OK Apply Cancel

Déploiement d'un webservice sur l'IBMi

IBM Web Administration for i

Welcome BOURREAU

Setup Manage Advanced Related Links

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WEBSERVICE > Manage Deployed Services > Service Properties

Service Properties

General Methods Library List Swagger Connection Pool Request Information

Information to be passed to web service implementation code ?

Specify Transport Metadata:

Transport Metadata	
☒	QUERY_STRING
☐	REMOTE_ADDR
☐	REMOTE_USER
☐	REQUEST_METHOD
☐	REQUEST_URI
☐	REQUEST_URL
☐	SERVER_NAME
☐	SERVER_PORT

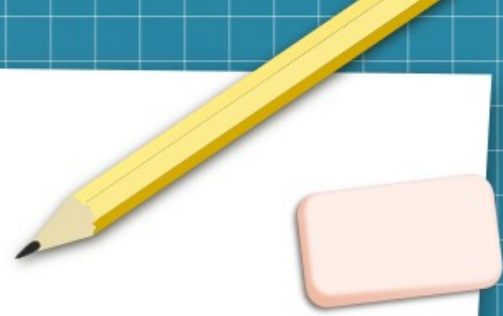
Specify HTTP Headers:

HTTP Headers	
There are no entries for this table.	

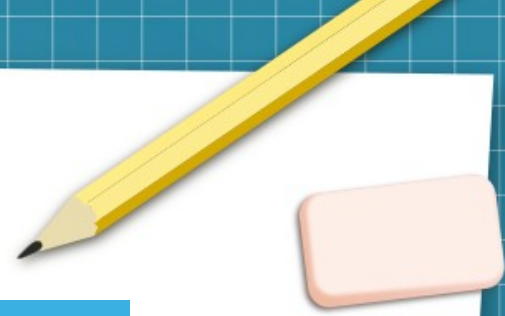
Add Remove All

OK Apply Cancel

L'outil actuel



L'outil actuel



Connexion

Log In

Login

Password

LOGIN ➤

L'outil actuel

Liste des webservers



✓ DÉMARRÉS

⚠ ARRÊTÉS

GROUP



Arrêté



Démarré



WEBSERVICE



Arrêté



Démarré



L'outil actuel

Liste des webservices



← RETOUR

WEBSERVICE

✓ DÉMARRÉS

⌚ ARRÊTÉS

ConvertTemp

ConvertTemp

Arrêté



Démarré



donnees

Données d'aba

Arrêté



Démarré



donneesEcc

Donnees Economiqu

Arrêté



Démarré



eleveur

API Eleveur

EnregTemp

Enregistrement d

envo

Envoi S

L'outil actuel

Détail d'un webservice

[← RETOUR](#)

Démo IBM

[TRANSFÉRER >](#)

Propriétés

Chemin d'installation : / /www/WEBSERVICE/webservices/services/student

Programme : / /QSYS.LIB/GPTEST.LIB/STUDENTRSC.SRVPGM

Statut : Running

Type démarrage : Arrêté ☒ Démarré

Utilisateur

BOURREAU

Liste des bibliothèques (séparés par ";")

/ /QSYS.LIB/GPTEST.LIB;

Position de la liste de ☒ Début ☐ Fin

bibliothèque :

[✎ MODIFIER](#)

Méthodes

remove

HTTP Request method : DELETE

URI Path template : {id: \w{9}}

update

HTTP Request method : PUT

URI Path template :

L'outil actuel

Détail d'un webservice



HTTP Request method : DELETE

URI Path template : {id: \w{9}}

Return output media type : application/json

Parameter name	I/O	Data type	Data length	Input source	Identifier	Default value
studentID	input	char	9	path	id	*NONE
httpStatus	output	int	4			*NONE

HTTP Request method : PUT

URI Path template :

Return output media type : application/json

Parameter name	I/O	Data type	Data length	Input source	Identifier	Default value
student	input	struct				*NONE
httpStatus	output	int	4			*NONE

create

HTTP Request method : POST

URI Path template :

Return output media type : application/json

Parameter name	I/O	Data type	Data length	Input source	Identifier	Default value
student	input	struct				*NONE
httpStatus	output	int	4			*NONE
httpHeaders	output	char	100			*NONE

getByID

HTTP Request method : GET

URI Path template : {id: \w{9}}

Return output media type : application/json

Parameter name	I/O	Data type	Data length	Input source	Identifier	Default value
studentID	input	char	9	path	id	*NONE
student	output	struct				*NONE
httpStatus	output	int	4			*NONE

L'outil actuel

Transfert d'un webservice



← RETOUR

Transférer le webservice "student" sur une autre machine

1ème étape : Chemins

Chemin de l'objet (terminé par "/")

/QSYS.LIB/LIBRARY.LIB/

Liste des bibliothèques (séparés par ";")

/QSYS.LIB/LIBRARY1.LIB;/QSYS.LIB/LIBRARY2.LIB;

2ème étape : Générer le fichier

GÉNÉRER 

3ème étape : Sélectionner la machine de destination

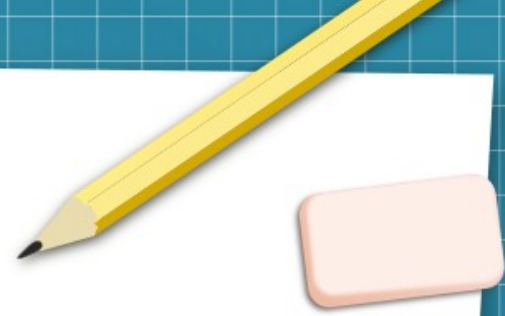
☐ Test

☒ Production

☐ Prod 1

ENVOYER 

Environnement technique



Pré-requis IBMi



- SS1 Option 3
- SS1 Option 12
- SS1 Option 30
- SS1 Option 33
- DG1 – IBM HTTP Server for i.
- JV1 Option 14
- Être à jour sur les groupes HTTP et JAVA pour profiter des dernières fonctionnalités
- Avoir le produit open-source NodeJS version 10 minimum
- Avoir les droits sur les commandes de sauvegarde/restauration SAVRST / RST sur les différents systèmes.

Pré-requis IBMi

L'application se base sur les scripts disponibles dans /QIBM/ProdData/OS/WebServices/bin/.

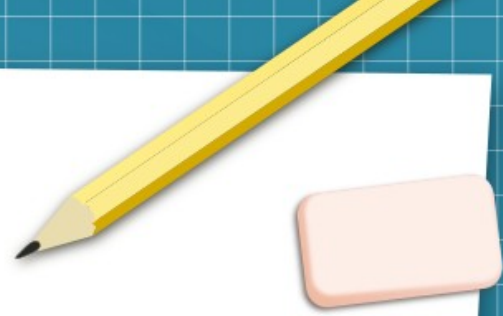
Command	Description
createWebServicesServer.sh	Creates an integrated web services server.
deleteWebServicesServer.sh	Deletes an integrated web services server.
getWebServiceProperties.sh	Gets web service properties.
getWebServicesServerProperties.sh	Gets web services server properties.
installWebService.sh	Installs a web service.
listWebServices.sh	Lists all deployed web services in a web services server.
listWebServicesServers.sh	Lists all integrated web services servers.
restoreWebServices.sh	Restores web services from a save file.
restoreWebServicesServer.sh	Restores web services server from a save file.

Pré-requis IBMi

L'application se base sur les scripts disponibles dans /QIBM/ProdData/OS/WebServices/bin/.

Command	Description
saveWebServices.sh	Saves web services to a save file.
saveWebServicesServer.sh	Saves web services server to a save file.
setWebServiceProperties.sh	Sets web service properties.
setWebServicesServerProperties.sh	Sets web services server properties.
startWebService.sh	Starts a web service that is in a stopped state.
startWebServicesServer.sh	Starts an integrated web services server.
stopWebService.sh	Stops a web service that is in an active state.
stopWebServicesServer.sh	Stops an integrated web services server.
uninstallWebService.sh	Uninstalls a web service.

Stack technique



Backend

- NodeJS

Frontend

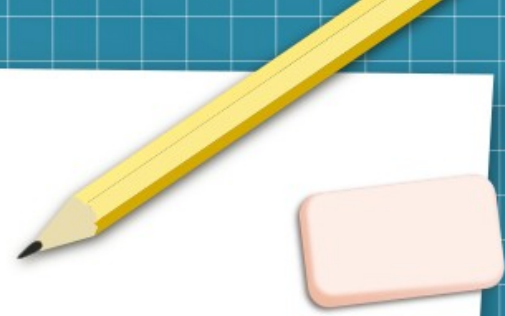
- Svelte
- Sapper
- Materializecss

Svelte



Svelte is a radical new approach to building user interfaces. Whereas traditional frameworks like React and Vue do the bulk of their work in the browser, Svelte shifts that work into a compile step that happens when you build your app.

Instead of using techniques like virtual DOM diffing, Svelte writes code that surgically updates the DOM when the state of your app changes.

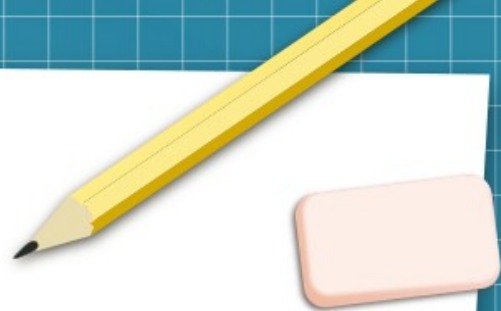


Sapper

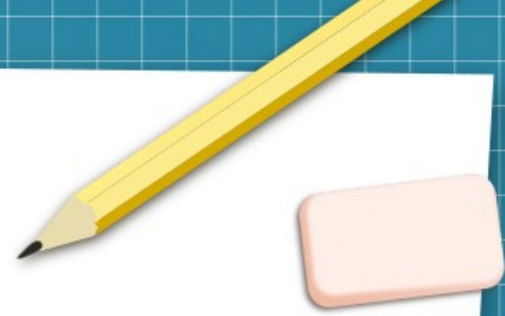


Sapper is a framework for building web applications of all sizes, with a beautiful development experience and flexible filesystem-based routing.

Unlike single-page apps, Sapper doesn't compromise on SEO, progressive enhancement or the initial load experience — but unlike traditional server-rendered apps, navigation is instantaneous for that app-like feel.



Qu'est-ce que le SSR ?



Le rendu côté serveur d'une page web ou Server Side Rendering (SSR) est une technique de développement web qui consiste à créer les pages html côté serveur pour les envoyer toutes faites au navigateur.

Les pages interagissent ensuite avec le serveur en ajax.

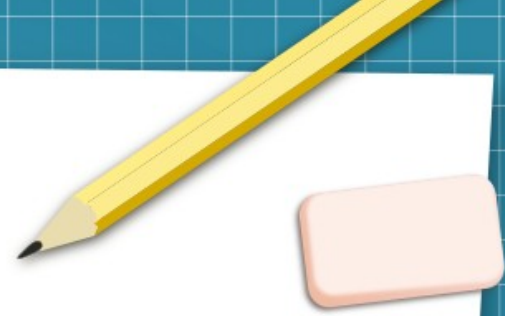
Le rendu est plus rapide, très proche d'une application installée en locale. Cette technique est beaucoup utilisée dans les progressives web app.

MaterializeCSS

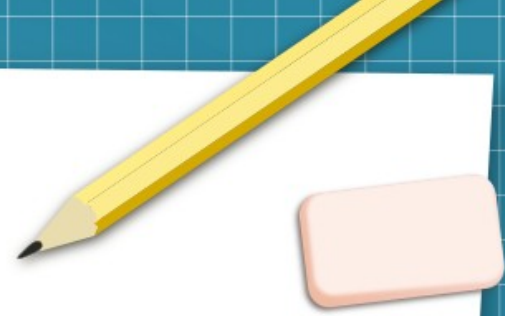
A modern responsive front-end framework based on Material Design



Pourquoi participer ?

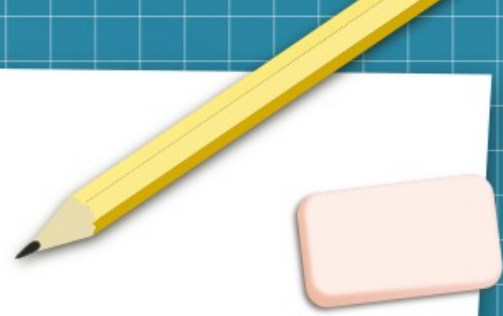


Pourquoi participer ?

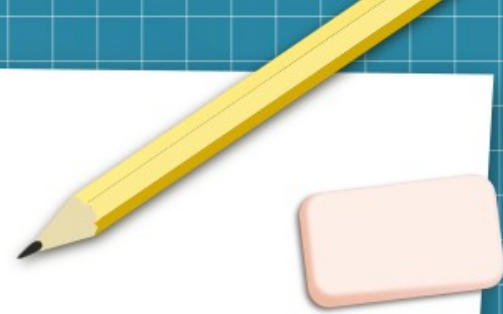


- Pour ne pas subir,
- Avoir le choix des fonctionnalités,
- Faire entendre votre voix,
- Passer moins de temps sur un projet,
- Parce que nous n'avons pas le temps !
- Si personne ne donne, personne ne reçoit.

Et après ?



Et après ?



Sources disponibles sur GitHub

https://github.com/FrenchIBMi/webservices/tree/master/App_webservice

Faites-vous connaître

seb.bourreau@perso.be



MERCI

