



Architect of an Open World™

# HooX Web Services

**HooX Web Services allows you to enrich your GCOS 7 applications by providing an access to information and services on the Web.**

## Introduction to Web Services

Web Services are application objects deployed via the Internet. They allow applications to dialogue remotely via the Internet, independently of the platforms on which these applications are executed.

Web Services are based on a technology and protocols that are standard and open and allow application components to operate among themselves and also with external applications.

These protocols are:

- Described in a standard interface
- Accessible by exchange of XML messages
- Accessible from any platform or programming language.

SOAP (Simple Object Access Protocol) is a universal protocol for dialogue between heterogeneous components. SOAP is based mainly on the XML language and on WSDL. XML defines

the structure of messages exchanged by the applications while WSDL offers a description of the application components. SOAP thus becomes the « de facto » standard for application integration.

## Why use HooX Web Services?

HooX Web Services allows the enrichment of GCOS 7 applications by others from the open world, without rendering the latter dependent on GCOS 7 specificities.

From the technical point of view, HooX Web Services allows GCOS 7 to be a client of Open services using the standard protocol SOAP.

A Java gateway allows the transmission of requests issued from a GCOS 7 application to the Web Service, which, for its part, knows how to interpret messages respecting this protocol. The requests are sent to the Web Service using the JAX-RPC API, which is a standard J2EE™ API..

## Components of HooX Web Services

Components to be installed on GCOS 7: libraries of C and Cobol functions. The Cobol and C APIs for accessing these functions on GCOS 7 are also supplied and documented.

- A Java gateway to be installed on a Java platform serving as intermediary between GCOS 7 and

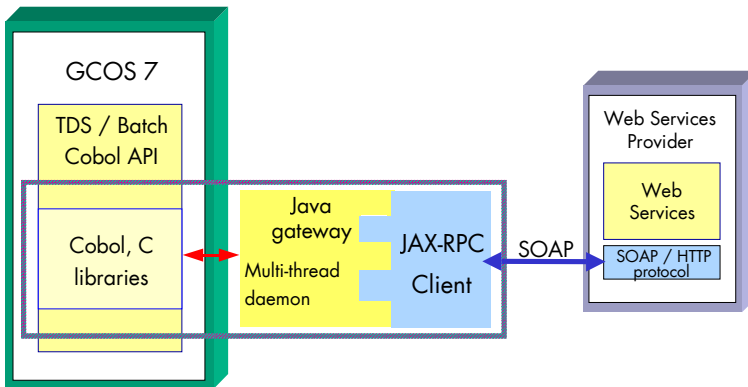
the Web Services provider.  
The gateway and the Web Services provider can co-exist on the same platform.  
The gateway can be installed on the Windows part of DPS 7000/XTA or NovaScale 7000.

- In addition, some extensions can be requested in service mode to access other types of component, such as:

- ERP (Enterprise Resource Planning)
- Specialized servers (decisional databases, printing, saves, storage)
- Mail server, Web applications
- Applications installed on other systems (Linux, Windows, AIX, ...).

# Architecture

GCOS 7 client: call of Web Services



— GCOS 7 connector to Web Services

# Technical specifications

## ENVIRONMENT

### GCOS 7 (DPS 7000/TA, DPS 7000/XTA and NovaScale 7000)

Cobol Batch	Interop7 ID410 or greater
C Batch	Interop7 ID410 or greater
Cobol TDS	Interop7 ID410 or greater and TS9920
OPEN 7	(for DPS 7000/TA)

An advanced version of HooX Web Services is currently available

### Java Platform (where the gateway is installed)

JDK 1.4	
Java gateway	Interop7 ID410 or greater

### Web Services Provider

An application server supporting Axis 1.1

### Bull validation

JOnAS 4.1 (integrating Tomcat)

### Communications

TCP/IP network

For further information, contact your commercial interface or the NovaScale GCOS Competence Center.

## FUNCTIONS

### Generic Cobol API

The functions of the Cobol API are listed below and are also used by other gateways:

- **WS-CONNECT**  
to connect to the gateway
- **WS-SET-REQUEST**  
to specify the Web Service required
- **WS-SET-PARAMETER**  
to specify an input parameter of the Web Service
- **WS-INVOKE**  
to activate a Web Service
- **WS-GET-PARAMETER**  
to obtain an output parameter
- **WS-DISCONNECT**  
to disconnect from the gateway
- **WS-CALL**  
to call a Web Service based on the preceding API functions

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