
Article

[John Pan](#) · Sep 9, 2022 5m read

How to call Ensemble/IRIS built-in HL7 V2 webservice - Java, PB9, Delphi7 samples

1. Summary

There are still legacy systems in the healthcare industry that use PB9, Delphi7, and other languages. To speed up the development process and enable third party applications to invoke the build-in HL7 V2 webservice provided by Ensemble or IRIS ASAP, we provide here several examples of invocations of Ensemble's HL7 V2 SOAP interface using Java, PB9 and Delphi7.

Assuming that `EnsLib.HL7.Service.SOAPService.CLS`, a build-in Business Service, is added to Production and named `PeiXunHI7SoapIn`, the external system can access HL7 V2 SOAP webservice through the following endpoint.

```
http://localhost:57772/csp/peixunpro/EnsLib.HL7.Service.SOAPService.CLS?CfgItem=PeiXunHI7SoapIn
```

`CfgItem=PeiXunHI7SoapIn` is an important parameter, `PeiXunHI7SoapIn` is the name of your BS.

With the parameter `CfgItem`, you can access SOAP interfaces that are deployed by the same Business Service class, but exposed under different names. For example, adding another SOAP Business Service with the same name `V2Service`, then accessing through the endpoint

<http://localhost:57772/csp/peixunpro/EnsLib.HL7.Service.SOAPService.CLS?CfgItem=V2Service>

will brought to the newly added Business Service.

Examples accessing this SOAP interface using Java, PB9 and Delphi7 are shown in the next section. Other languages without examples can also call the V2 SOAP Webservice via such an endpoint.

Tip: Pay attention to the definition of HL7 V2 Segment separator in various languages , which is marked in the following code examples, e.g. PB uses `char(13)+char(10)` as carriage return, and Delphi uses `#13+#10` for line break.

2. Samples

2.1 Java

```
2. package hl7.send;

import java.rmi.RemoteException;
import javax.xml.rpc.ParameterMode;
import javax.xml.rpc.ServiceException;
import org.apache.axis.client.Call;
import org.apache.axis.client.Service;
import org.apache.axis.encoding.XMLType;

public class SendHl7MSG{
    public String invokeRemoteFuc() {
        String endpoint =
"http://localhost:57772/csp/peixunpro/EnsLib.HL7.Service.SOAPService.CLS?CfgItem=PeiXunHl7SoapIn";
        String result = "no result!";
        Service service = new Service();
        Call call;
        Object[] object = new Object[1];
        // Notice the line break
        String s1 = "\r\n";

        String str=
"MSH|^~\&|HIS|MediInfo|MediII|MediInfo|20150118162159||SIU^S12|145d03160de54b29a74eefa761ae4e05|P|2.4"+s1+
"SCH||A1002||||(??)????||||^^^07:11~07:22^^^07:11~07:22|||||||112211522"+s1+"RGS|||";
        object[0]= str;
        try {
            call = (Call) service.createCall();
            call.setTargetEndpointAddress(endpoint);// Remote call path
            call.setOperationName("Send");// Method to be invoked
            // Set the parameters
            call.addParameter("Input", // Parameter name
                XMLType.XSD_STRING, // Parameter type:String
                ParameterMode.IN);// Parameter mode?'IN' or 'OUT'
            // Set the return value type?
            call.setReturnTy
pe(XMLType.XSD_STRING);// Return type?String
            result = (String) call.invoke(object);// Remote call
        } catch (ServiceException e) {
            e.printStackTrace();
        } catch (RemoteException e) {
            e.printStackTrace();
        }
        return result;
    }
    public static void main(String[] args) {
        SendHl7MSG t = new SendHl7MSG();
        String result=null;
        result = t.invokeRemoteFuc();
    }
}
```

```
        System.out.println(result);  
    }  
}
```

1.

2.2 PB 9

```
String endPoint=  
"http://192.168.2.64:57772/csp/jhip/EnsLib.HL7.Service.SOAPService.cls?CfgItem=HISHL7  
SoapIn"  
soapconnection lsc_conn //Obtain the SOAP class  
hl7v2servicesoap lsrv_obj  
//Get wsdl  
  
lsc_conn =create soapconnection  
// Instantiating with the EndPoint provided by Ensemble,  
// i.e., adding the name of the CfgItem configuration  
lsc_conn.createinstance(lsrv_obj,"hl7v2servicesoap",endPoint)  
//PB??char(13)+char(10) as a line break  
// Also notice that the ~ character is an escape character in PB and is also a separa  
tor in HL7, so two ~'s are used in PB to represent one single HL7 V2 separator  
string msg=""  
msg="MSH|^~\&|HIS||JHIP||20150119163230||ADT^A01^ADT_A01|8E64C7FE-7750-482E-  
BC58-DC358FF0A05|P|2.4|||||UTF8"+char(13)+char(10)  
msg+="EVN||20150119163230||2341^???|20150119163230"  
msg+=char(13)+char(10)+  
"PID|1||685923^^^^PI~~2^^^^VN||??^ZhangSan||19610524000000|M|AB|???^???^???^ ???^100  
085^^B|^^^^^^13868108756|^^^^^^13868108756|M^?|12^?|CHN^?|10108|20150119162910|8000|7000DG1|1|E11.900^2^???|20160728170353  
|A"  
mle_2.text=lsrv_obj.send(msg) // Method call
```

2.3 Delphi 7

```
procedure TForm1.Button1Click(Sender: TObject);  
var  
    mHttpRIO: THTTPRIO;  
    mServiceSoap: HL7v2ServiceSoap;  
    msg: String;  
    result:String;  
begin  
    mHttpRIO := THTTPRIO.Create(nil);  
    try  
        // Set the URL with the CfgItem configuration item to EndPoint  
        mHttpRIO.URL :=
```

```
'http://192.168.2.64:57772/csp/jhip/EnsLib.HL7.Service.SOAPService.cls?CfgItem=HISHL7
SoapIn';
  mHttpRIO.HTTPWebNode.UseUTF8InHeader
:= true; // Add this line to specify that UTF-8 code transmission is used
  mHttpRIO.Converter.Encoding:='UTF-8';
  mServiceSoap := mHttpRIO as HL7v2ServiceSoap
  // The line break in Delphi is #13+#10
  msg:='MSH|^~\&|HIS||JHIP||20150119163230||ADT^A01^ADT_A01|8E64C7FE-7750-482E-
BC58-DC358FF0A05|P|2.4|||||UTF8'+#13+#10;
  msg:=msg+'EVN||20150119163230||2341^???|20150119163230';
  msg:=msg+#13+#10+
'PID|1||685923^^^^PI~~2^^^^VN||??^ZhangSan||19610524000000|M|AB|???^???^???^ ???^100
085^^B|';
  msg:=msg+
'|^^^^^^13868108756|^^^^^^13868108756|M^?|||12^?|||CHN^?|||??????
??|?????NK1|1|BRO|||??|||??^lisi|^^^^^^13723412432|????7^???
^???^???^100097';
  msg:=msg+#13+#10+
'PV1|1|I|A30600^^306007^10108&????|U||225^?|||7|Y|225^???si|84|10030791|||
|||10108|20150119162910||8000|7000DG1|1|E11.900^2????|201607281703
53|A';
  result:=mServiceSoap.Send(msg); // Calling methods in the webservice
  showmessage(result) ;
  Memo2.Text:=result;
except
end;
```

[#Java #Ensemble #InterSystems IRIS for Health](#)

Source

URL:<https://community.intersystems.com/post/how-call-ensembleiris-built-hl7-v2-webservice-java-pb9-delphi7-samples>