

SelmetWMSClient-GlassFish

Case Study

1	INTRODUCTION.....	3
2	Glimps into the system.....	4
2.1	WebServices (GlassFish)	4
2.2	JDBC Resource & Connection Pooling (GlassFish).....	5
2.3	NetBeans IDE.....	6
3	Rouged terminals.....	7
3.1	Dolphin 7600	7
3.2	Consuming a webservice in VS2005	7
3.3	Screens on terminal.....	8

1 INTRODUCTION

Main goal of our Warehouse Management System (WMS) solution is tight integration with existing ERP solution, at customer sites, based on Suse Linux & PostgreSQL. In addition, main goals are to have as quick response on portable data terminals as possible, and to be able to perform all processes needed in a WMS.

Our solution is based on 2 modul solution

- 1) Webservice module written usnig NetBenas 6.0.1, and GlassFish v2ur2.
- 2) Rich client on rouged terminals Dolphin 7600 (<http://www.handheld.com>) written in c# using VS 2005SP1.

As minimum prerequisites all warahouse area shold be covered with WiFi signal.

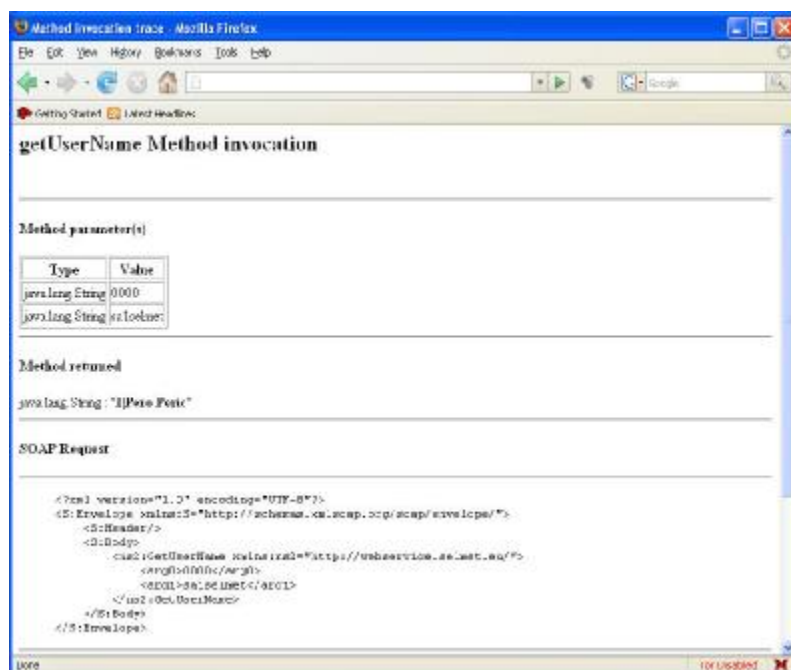
2 Glimps into the system

2.1 WebServices (GlassFish)



pic.1

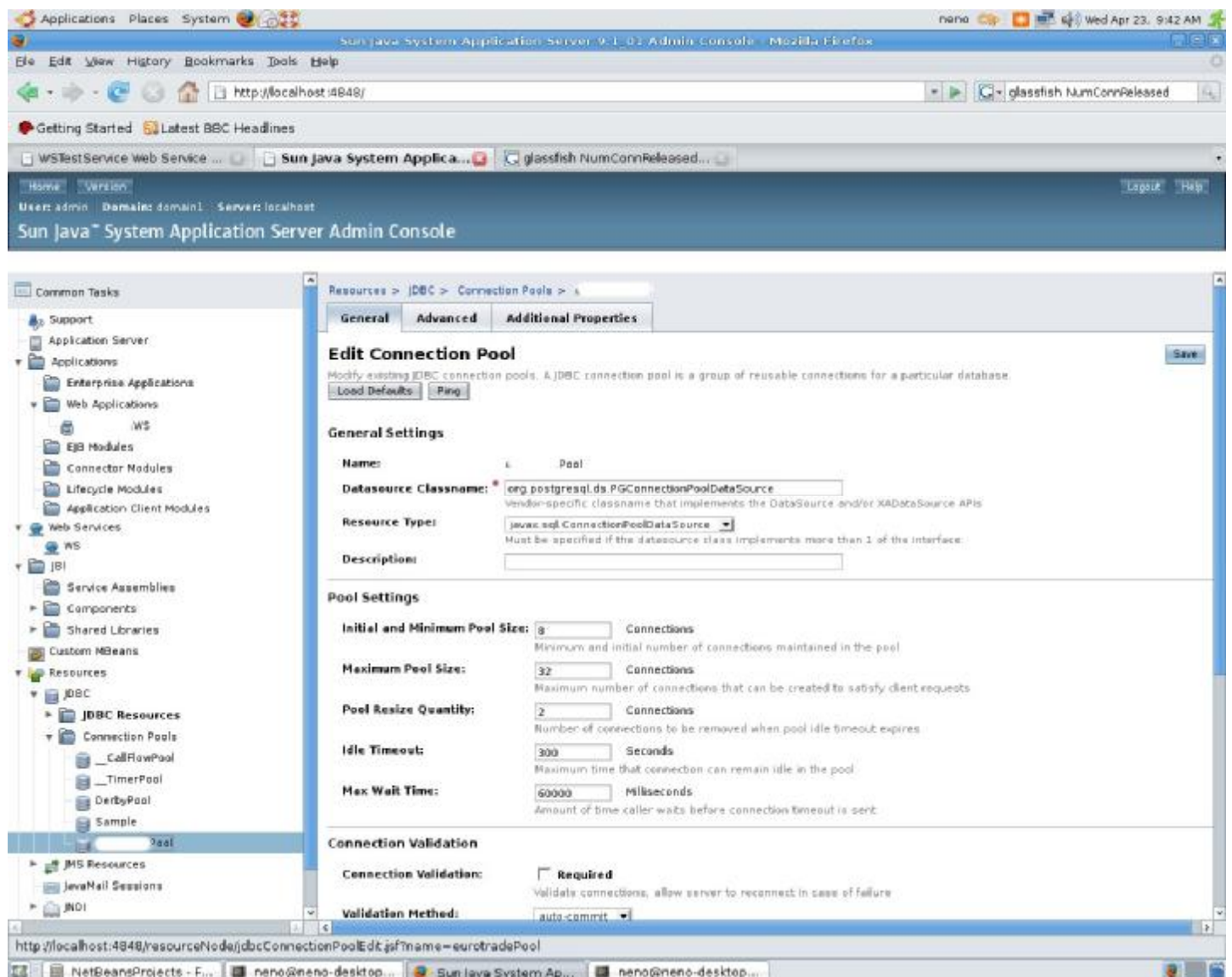
During testing here is a screenshot how it looks one of the methods, getUserName, pic.1.



pic.2

Here is a screenshot after method invocation, with result. Those values you can see also on terminal side pic.7.

2.2 JDBC Resource & Connection Pooling (GlassFish)

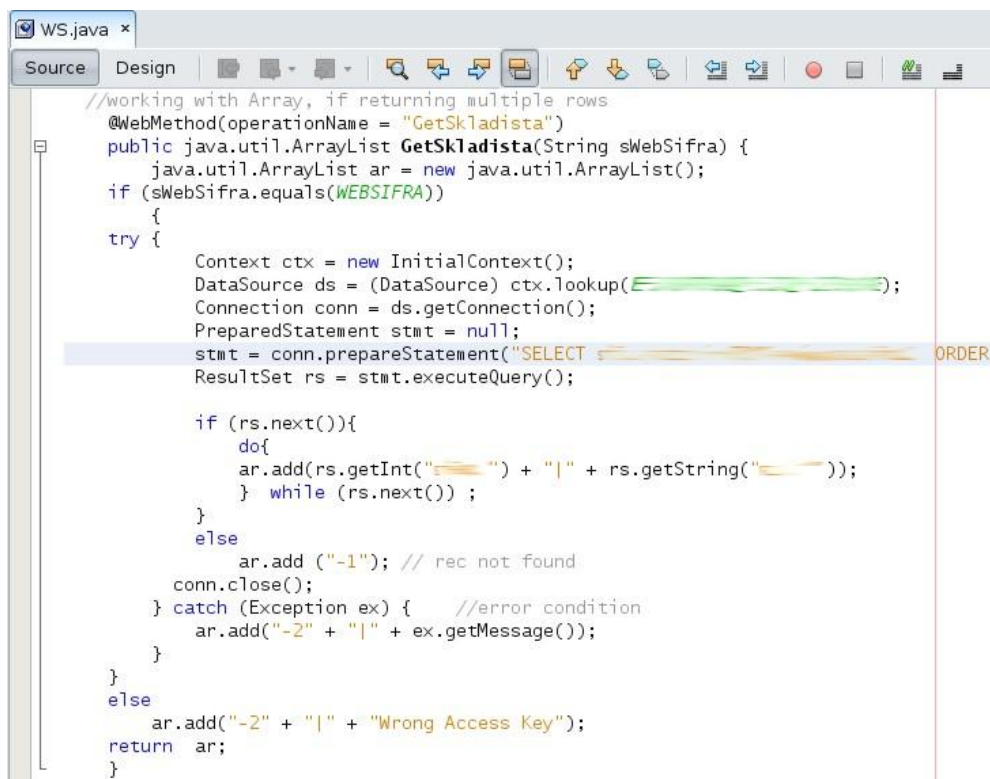


Pic. 3

Another used feature from GlassFish is JDBC Resource and Connection Pool, as shown on Pic.3

2.3 NetBeans IDE

There is a screenshot how one method looks in NetBeans IDE.



```
//working with Array, if returning multiple rows
@WebMethod(operationName = "GetSkladista")
public java.util.ArrayList GetSkladista(String sWebSifra) {
    java.util.ArrayList ar = new java.util.ArrayList();
    if (sWebSifra.equals(WEBSIFRA))
    {
        try {
            Context ctx = new InitialContext();
            DataSource ds = (DataSource) ctx.lookup("jdbc:derby://localhost:1527:SELNET");
            Connection conn = ds.getConnection();
            PreparedStatement stmt = null;
            stmt = conn.prepareStatement("SELECT * FROM SKLADISTA WHERE SIFRA = ? ORDER BY ...");
            ResultSet rs = stmt.executeQuery();

            if (rs.next()){
                do{
                    ar.add(rs.getInt("ID") + "|" + rs.getString("SIFRA"));
                } while (rs.next());
            }
            else
                ar.add ("-1"); // rec not found
            conn.close();
        } catch (Exception ex) { //error condition
            ar.add("-2" + "|" + ex.getMessage());
        }
    }
    else
        ar.add("-2" + "|" + "Wrong Access Key");
    return ar;
}
```

Pic. 4.

As you can see we are using also a GlassFish JDBC Recource in our Java source code.

3 Rouged terminals

3.1 Dolphin 7600

Rouger terminal, based on WinCE 5.0. Adaptus[®] imager engine, 802.11b/g, CPU Samsung@400MHz...

More info at <http://www.handheld.com>.



Pic.5

3.2 Consuming a webservice in VS2005

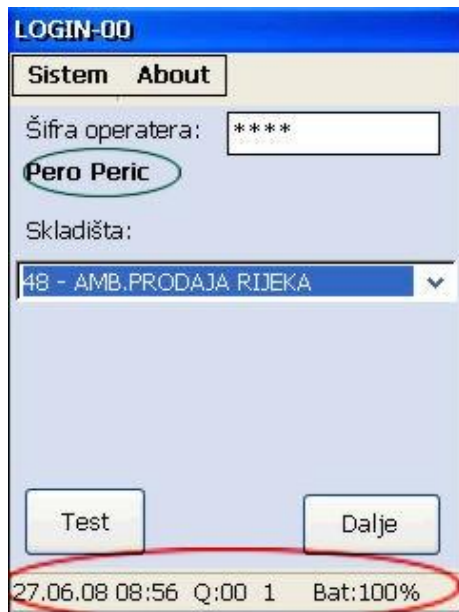
```

}
#region txtSifraOperatera
if (((TextBox)sender).Name == "txtSifraOperatera" && e.KeyChar == 13 &&
txtSifraOperatera.Text.Length > 0)
{
    Cursor.Current = Cursors.WaitCursor;
    string ar = Program.WSS.GetUserName(txtSifraOperatera.Text.Trim(), Program.
VodawebServisSifra());
    // vraca sifru 1 line operatera
    string [] red = ar.Split('|');
    if (red[0] == "-2")
    {
        Cursor.Current = Cursors.Default;
        clsS.NB("WS Greška: " + red[1], 2);
        txtSifraOperatera.SelectAll();
        return;
    }
    else
    {
        // found
        if (red[0] != "-1")
        {
            Program.SIFRA_OPERATERA = red[0];
            lblOperatorName.Text = red[1];
            cboSkladista.Focus();
            PunicBOSkladista();
        }
        else
        {
            clsS.NB("Operater nije pronaden!", 2);

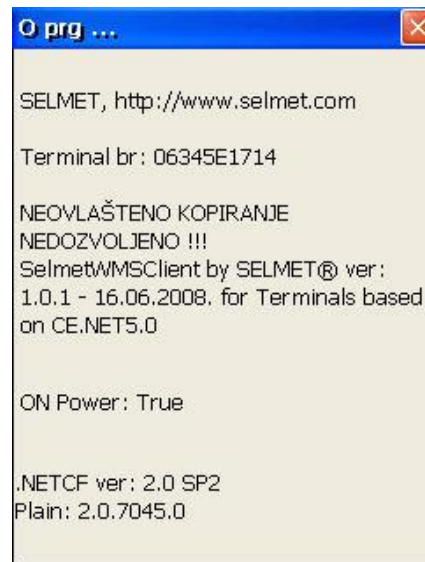
```

Pic. 6

3.3 Screens on terminal

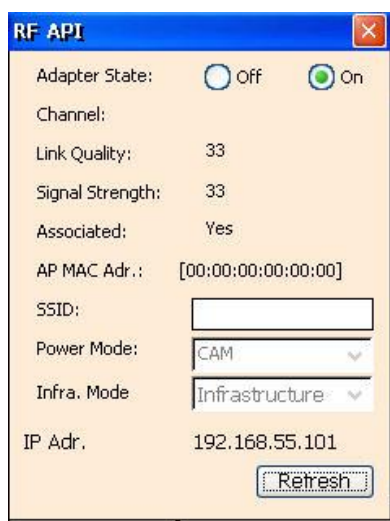


Pic.7

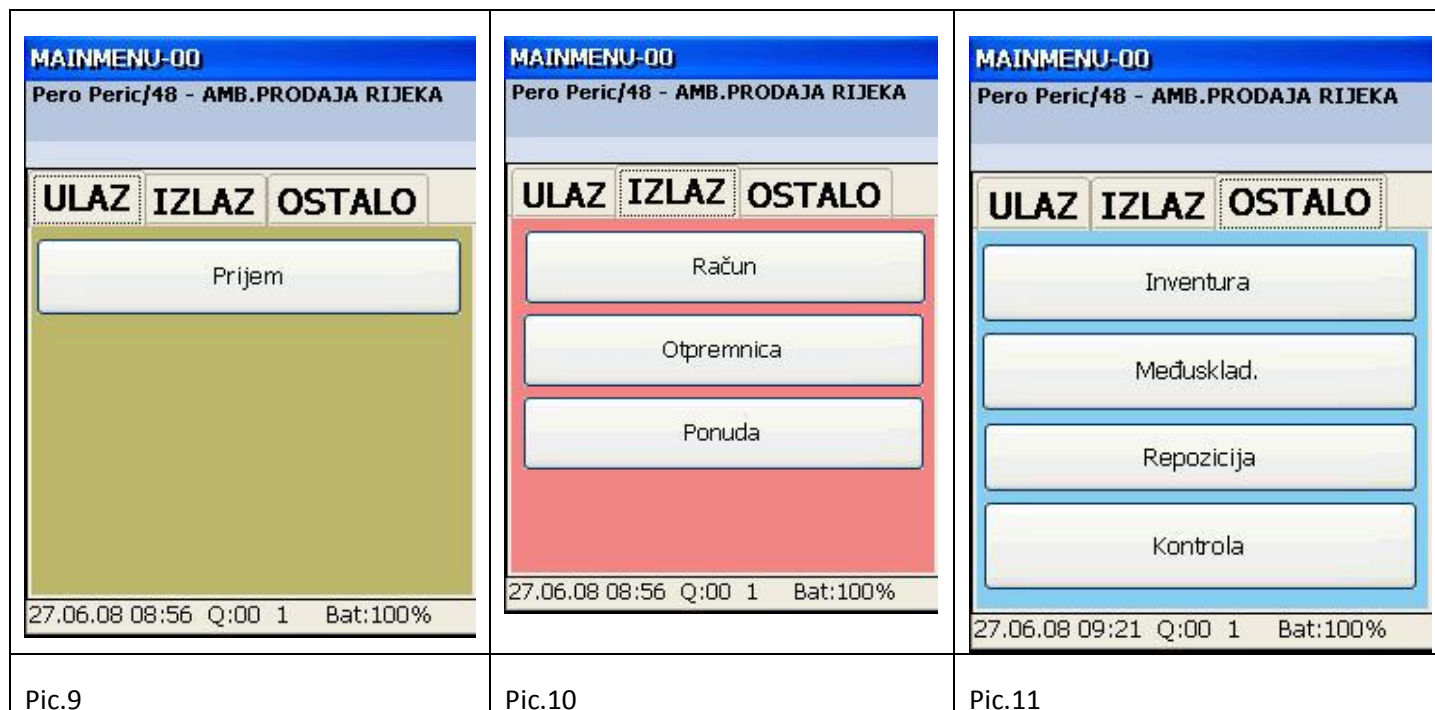


Pic.8

There are some screens on terminal side. Login screen with username, and after successful login list of warehouses. In status line, user can see, current date time (synced by Webservice), quality of WiFi signal, keyboard status (numeric on or alpha on), as well as battery status. In about box user can see the version of application as well as version on .NET Compact Framework.



On this picture you can see also, a status of WiFi connection. This is very useful during Debug sessions. This is done using Dolphin 7600 SDK for VS 2005.



On those screens you can see some WMS operations, like Prijem (receiving goods), Račun/Otpremnica (delivery), Inventura (Inventory)...

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