

## Technical description

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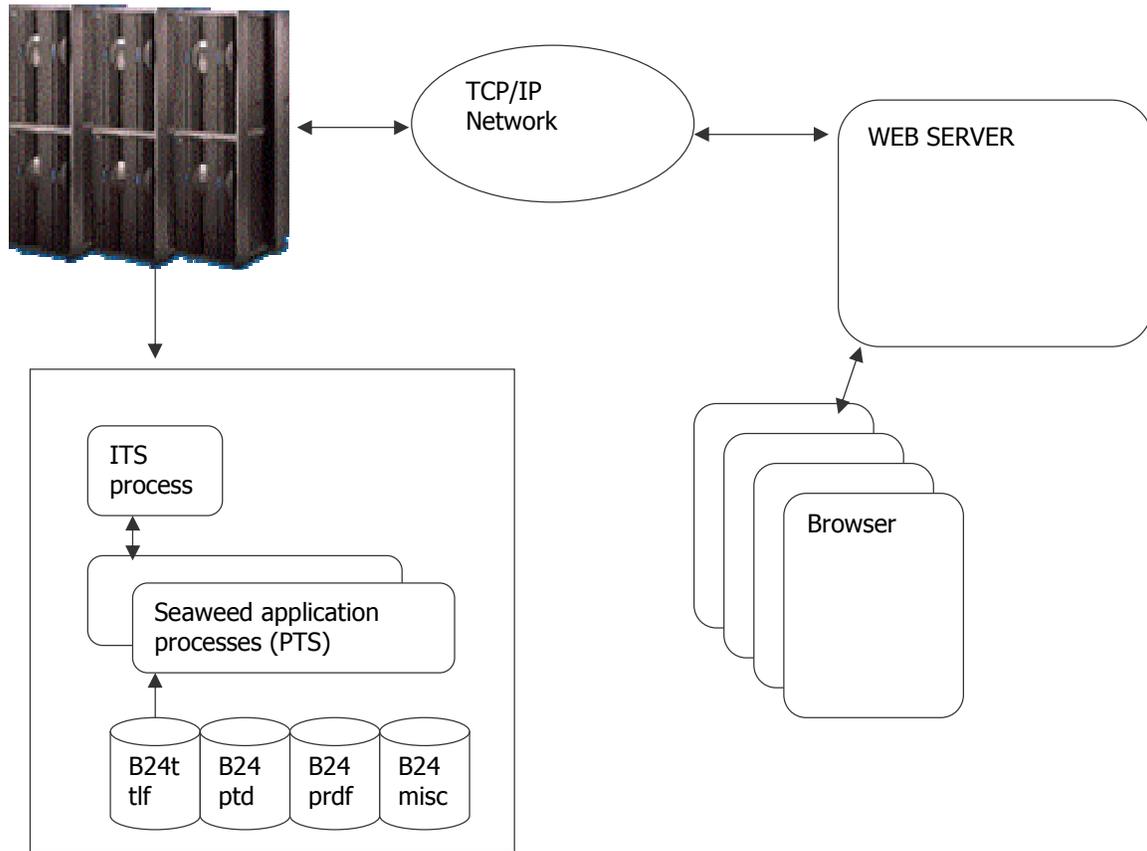
## History

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Date	Version	Comment
2006-01-30	1,0	Initial document

## Technical overview

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PTS process handles request, produce replies in xml format. All message handling to and from requesters is processed thru the ITS process.

ITS is supplied as a separate function and can be downloaded from [mainman.se](http://mainman.se). Specification, documentation and the software compressed into a zip file.

The package provided here include a PTS program, written in TAL, all source code is available for free. It include code for the communication with ITS. On request it reads the Base24© ptlf file, on builds a reply, send it thru ITS to the requesters.

PTS does not use \$receive nor netread/netwrite© for message processing. Tcp/IP sockets is the method of choice here. This approach provides for the PTS-process to be written in many languages, both compiled as c,c++,tal, also scripting as asp, php, java. PTS process do not have to be a nsk/oss process, as it communicate thru Tcp/IP and talk to ITS, any networked computer from witch users want to access data can be used with non-proprietary and non legacy methods.

Currently, in the provided example., only ptlf file is read. Anyone is free to make customized changes for ptlf or any other file type.

While the message format is xml based, your application is moving towards the .NET© and soap as a web service.

## PTS description

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For an ITS message interface description – see ITS documentation.

Each xml element name corresponds to a ddl field name in the ptlf.  
All XML names are unique, changes possible.

XML PTS server example in TAL:

```
PROC ptlf_format_head;  
BEGIN  
.  
.  
iobuf[(find_null(iobuf[0]))] ':='  
    ! REC TYPE = <RT>  
    ["<RT>"] & ptlf.head.rec^typ.byte ..... ["</RT>"] .....  
    ! LOGICAL NET = <LN>  
    ["<LN>"] & ptlf.head.crd.ln.byte ..... ["</LN>"].....  
    ! FINACIAL INSTITUTION = <FIID>  
    ["<FIID>"] & ptlf.head.crd.fiid.byte..... ["</FIID>"] ....  
    .....  
END;
```

XML PTS requester example in PHP:

```
function list_detail ($startup) {  
.....  
    foreach ($xml_det->PTLF as $ptlf) {  
.....  
        echo '<tr><td colspan="0"><div align="left">  
.....  
        echo '    <td colspan="0"><div align="left"><span class="style8">'.RECTYPE.'</span></td>';  
        echo '    <td colspan="0"><div align="left"><span class="style5">  
        .'. $ptlf->RT.'</span></td></tr>';  
  
        echo '<tr><td colspan="0"><div align="left"><span class="style8">'.LNET.'</span></td>';  
        echo '    <td colspan="0"><div align="left"><span class="style5">  
        .'. $ptlf->LN.'</span></td>';  
        ..  
        ..  
        ..  
    }  
}
```

Note:

PTS and the ptlf ddl is likely to be changed, as for the xml names.

Server is WAMP = **W**indows **A**pache **M**ysql **P**hp. It runs on your workstation or server. Also, LAMP = **L**inux **A**pache **M**ysql **P**hp, is possible to use.

Here we only use WAMP.

Current version, tested ok, is 1.4.4, available for download at [mainman.se](http://mainman.se) or [wampserver.com](http://wampserver.com).

In the php application we have a logon procedure, witch accept any user/password. The user have the possible to access a user database local on the web server or in the nsk host. Example on how to create and access a mySQL user database is provided in this document.

Steps:

1. download the wamp software.
2. run the install
3. copy the iotag/seaweed web application to the Apache root
4. optionally create and use a user database
5. change the php.ini
  - session.auto\_start = 1
  - display\_errors = off (socket connect errors handled by php)

## User database

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1. start mysql
  - c:\<installed-directory>\mysql\bin\mysql.exe
2. Create the database, table
  - mysql > create database seaweed;
  - mysql > use swusers;
  - mysql > create table users (user\_name char(12), passw char (12));
  - mysql > exit;
3. Insert
  - a. mysql > insert into users values ("usr1", "psw1","usr2",psw2");