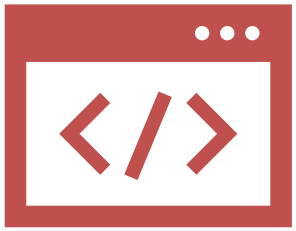
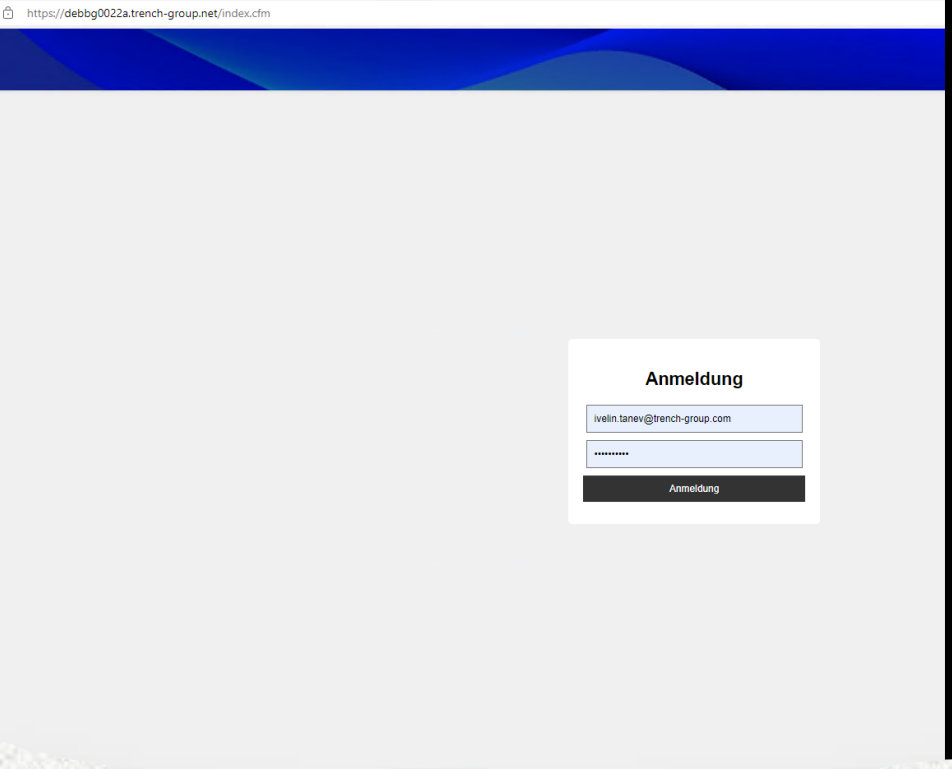
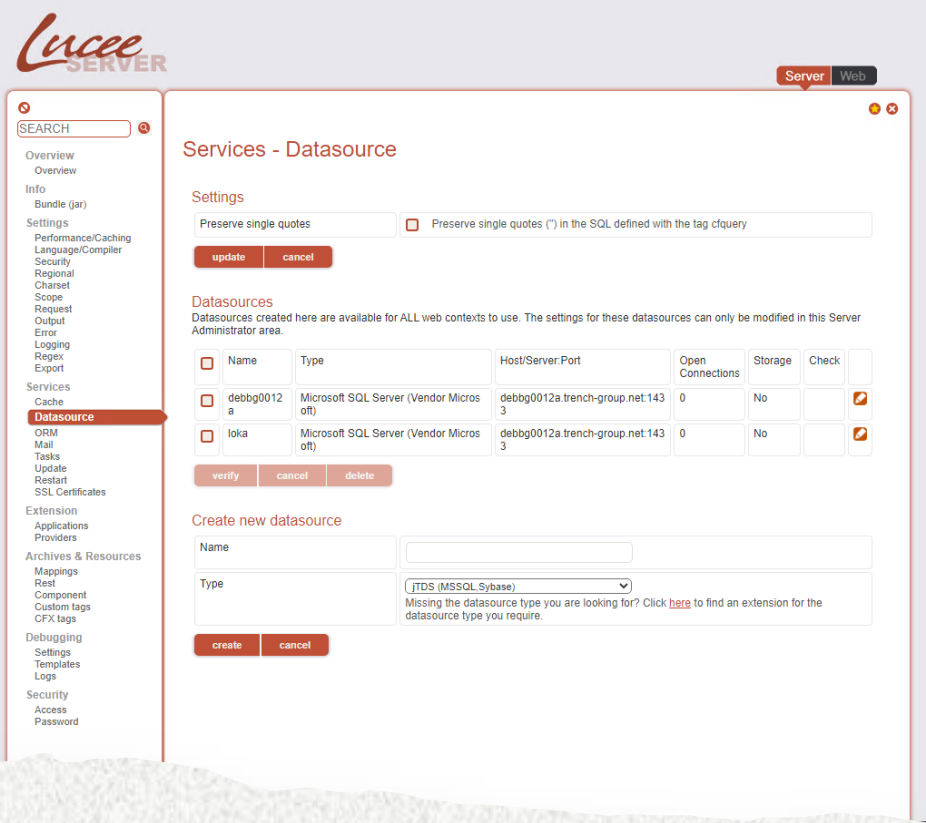
Web Applications and Tools Overview



- Overview of the technologies and tools used for developing our web applications.

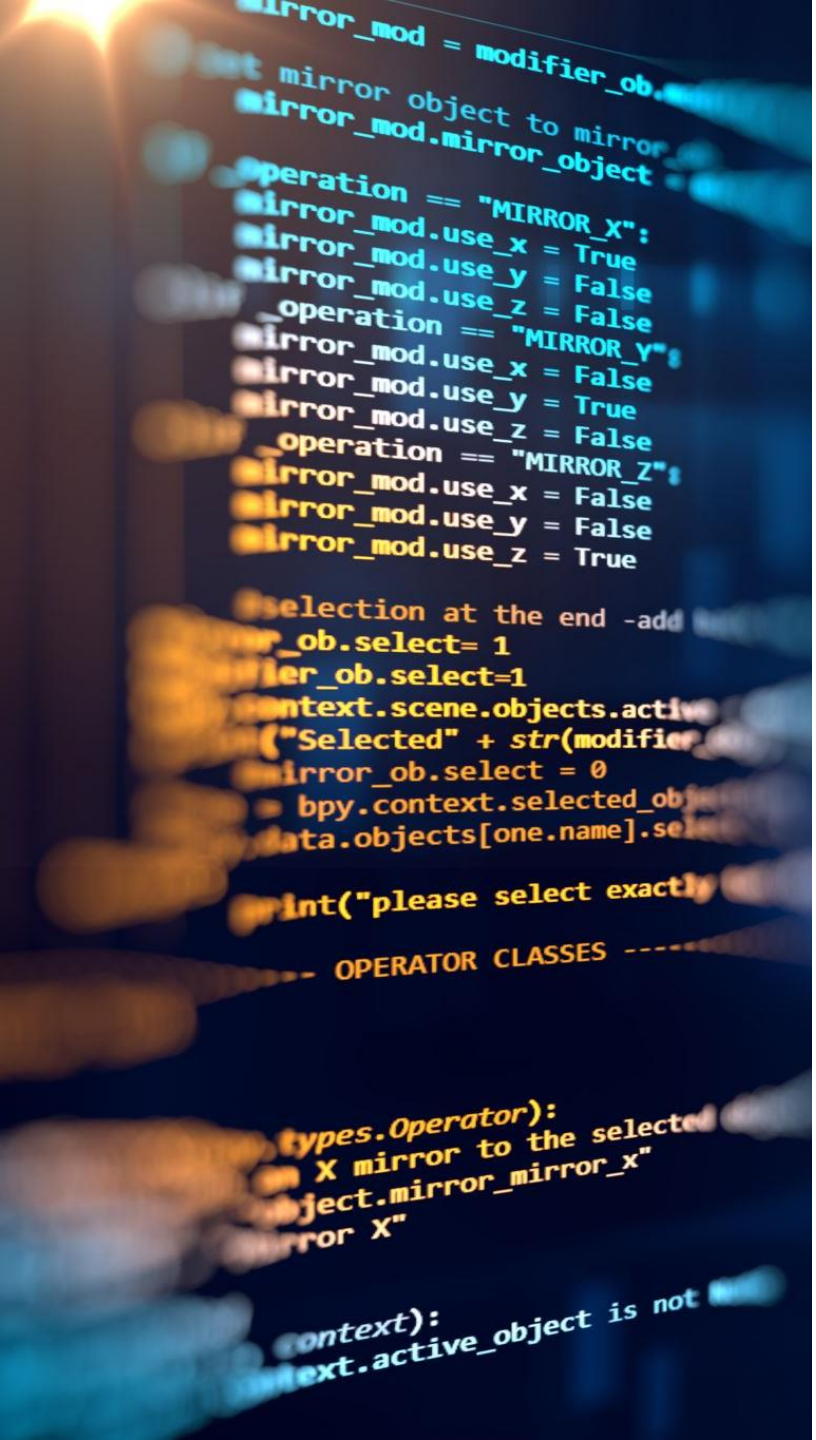
- Focus on server, database, programming languages, and application functionalities.





Server and Database Connectivity

- - Server: https://debbg0022a.trench-group.net/
- - Lucee Server: Lucee 6.0.1.83 - Overview - Lucee Server Administrator
- - Open-source platform.
- - Connections established with Microsoft SQL Server Database.



Programming Languages and Technologies

- - Programming Languages Used in Lucee:
- - HTML
- - CFML (ColdFusion Markup Language)
- - JavaScript
- - CSS
- - API
- - XML
- - SQL (for CFQUERY)
- - more…

Web Label APP Integration

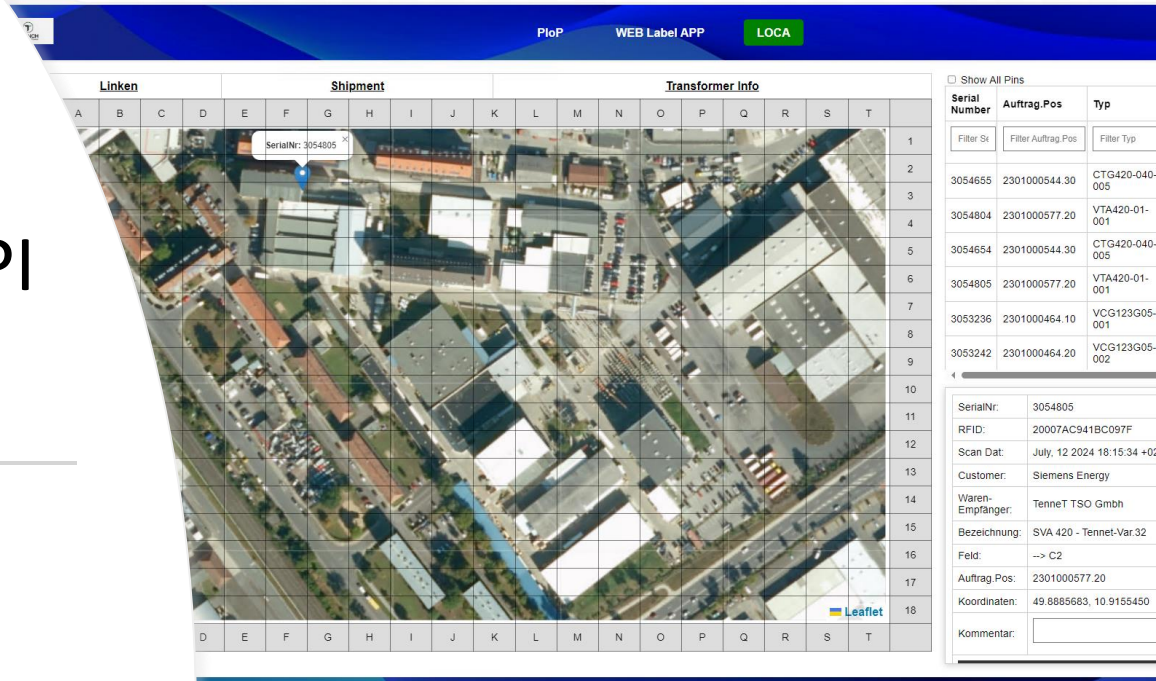
- - Functionality:
- - Connection from web server to NiceLabel.
- - Execution of requests for preview and print of labels.
- - Connection from webserver to Microsoft SQL Database

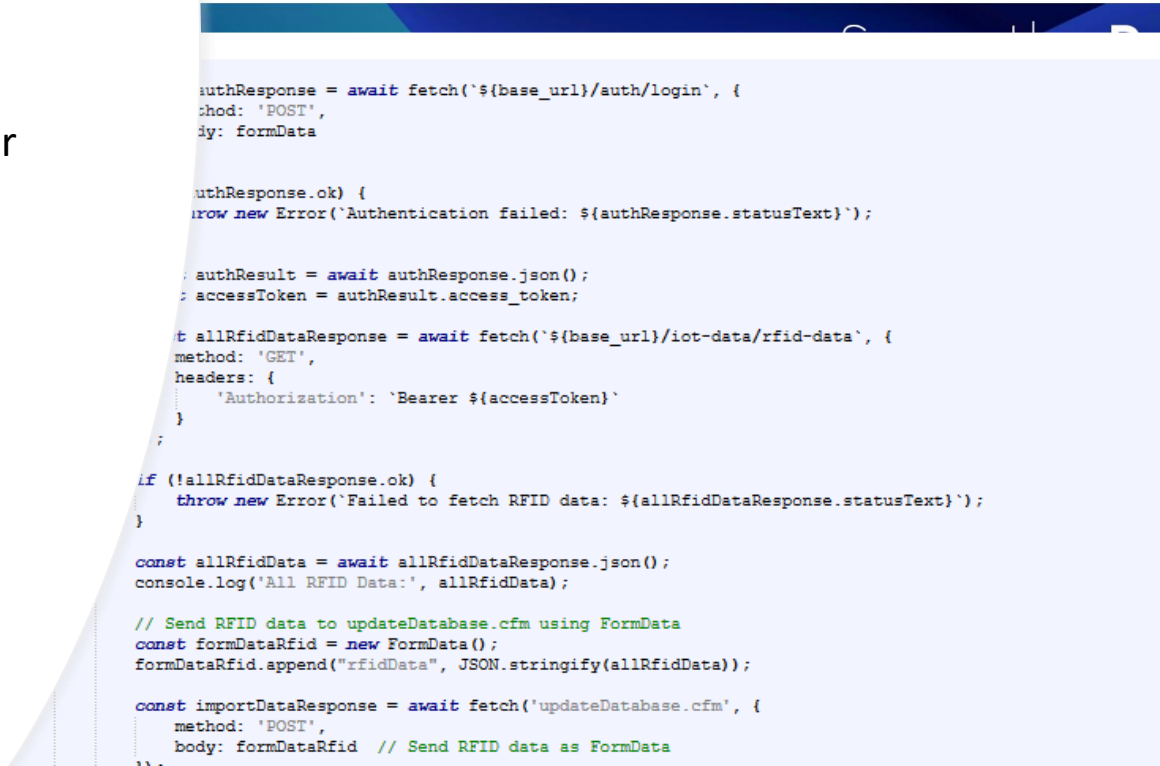
```
function sendXMLForPreview() {
            const xmlData = document.getElementById('xmlContent').value;
            const myURL = 'https://debbg0013a.trench-group.net:50001/Webservice4XML_NEW';

            const xmlhttp = new XMLHttpRequest();
xmlhttp.responseType = 'text';

            xmlhttp.onreadystatechange = function() {
                if (xmlhttp.readyState === 4) {
                    console.log('Response Type:', xmlhttp.responseType);
                    if (xmlhttp.status === 200) {
                       const response = parseXMLResponse(xmlhttp.responseText);


            // For preview action - show image
            const imageURL = "" + response.preview64;

            // Displaying the image
            const previewImage = document.createElement('img');
            previewImage.src = imageURL;
            previewImage.alt = 'Preview Image';
            document.getElementById('result').innerHTML = '';
            document.getElementById('result').appendChild(previewImage);
            console.log('Response:', response.responseText);

                    } else {
                        console.error('Error: ', xmlhttp.status);
                    }
                }
            };

            xmlhttp.open('POST', myURL, true);
            xmlhttp.setRequestHeader('Content-Type', 'text/plain');
            xmlhttp.send(xmlData);
        }
```

```
// Constructing the XML string using the fetched data
xmlString = `<?xml version="1.0" standalone="no"?>
<!DOCTYPE labels SYSTEM "label.dtd">
<labels _FORMAT="${selectedFormat}" _JOBNAME="${gidValue}" _QUANTITY="${quantity}" _PRINTERNAME="${selectedPrinter}" _PREVIEW="TRUE" _PREVIEW_FORMAT="PNG">
    <label>
        <variable name="GID">${gidValue}</variable>
        <variable name="Zeile1">${escapeXml(Zeile1)}</variable>
        <variable name="Zeile2">${escapeXml(Zeile2)}</variable>
        <variable name="Zeile3">${escapeXml(Zeile3)}</variable>
    </label>
</labels>`;

xmlStringPrint = `<?xml version="1.0" standalone="no"?>
<!DOCTYPE labels SYSTEM "label.dtd">
<labels _FORMAT="${selectedFormat}" _JOBNAME="${gidValue}" _QUANTITY="${quantity}" _PRINTERNAME="${selectedPrinter}" _PRINT="TRUE">
    <label>
        <variable name="GID">${gidValue}</variable>
        <variable name="Zeile1">${escapeXml(Zeile1)}</variable>
        <variable name="Zeile2">${escapeXml(Zeile2)}</variable>
        <variable name="Zeile3">${escapeXml(Zeile3)}</variable>
    </label>
</labels>`;
```

Data Transfer and API Usage

- - Application: LOCA
- - SQL Queries: Interaction with the database.
- - API: Data transfer between our database and Thomas K's database.





```
uthResponse = await fetch(`${base_url}/auth/login`, {
thod: 'POST',
dy: formData

uthResponse.ok) {
row new Error(`Authentication failed: ${authResponse.statusText}`);

authResult = await authResponse.json();
accessToken = authResult.access_token;

t allRfidDataResponse = await fetch(`${base_url}/iot-data/rfid-data`, {
method: 'GET',
headers: {
    'Authorization': `Bearer ${accessToken}`
}
});

if (!allRfidDataResponse.ok) {
    throw new Error(`Failed to fetch RFID data: ${allRfidDataResponse.statusText}`);
}

const allRfidData = await allRfidDataResponse.json();
console.log('All RFID Data:', allRfidData);

// Send RFID data to updateDatabase.cfm using FormData
const formDataRfid = new FormData();
formDataRfid.append("rfidData", JSON.stringify(allRfidData));

const importDataResponse = await fetch('updateDatabase.cfm', {
    method: 'POST',
    body: formDataRfid  // Send RFID data as FormData
```

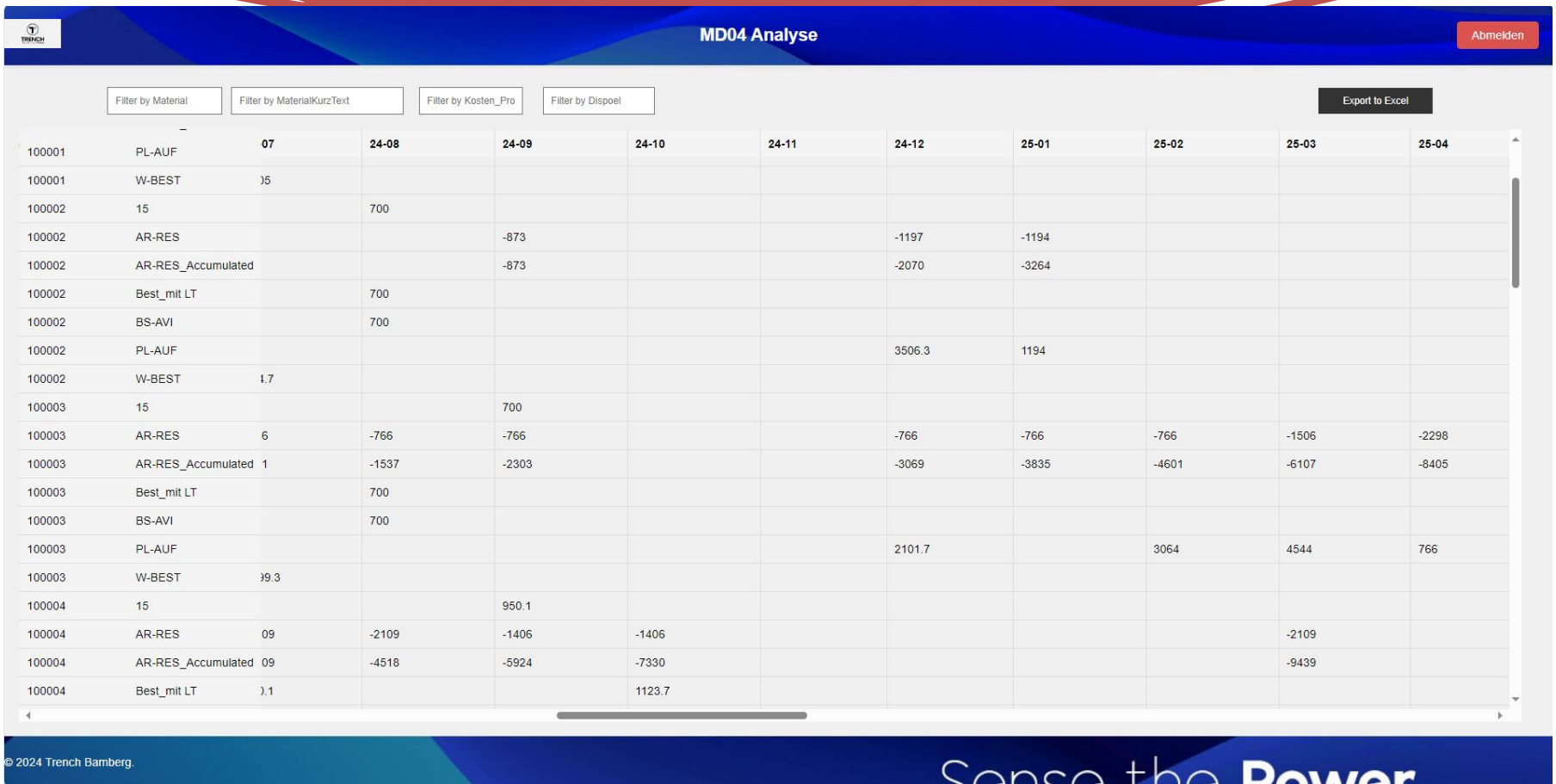
SQL Server Procedures

- - Procedures in Microsoft SQL Server Database:
- - Used for multiple reports.
- - Data analysis.
- - Table generation for subsequent use in WEB Label APP.

```
USE [uniBase]
GO
/****** Object:  StoredProcedure [dbo].[ABC_ANALYZE_UPDATE_NEW]    Script Date: 07/15/2024 10:35:10 ******/
SET ANSI_NULLS ON
GO
SET QUOTED_IDENTIFIER ON
GO
-- =============================================
-- Author:      Ivelin Tanev
-- Create date: 11/10/2023
-- Description: ABC_ANALYZE_UPDATE
-- =============================================
ALTER PROCEDURE [dbo].[ABC_ANALYZE_UPDATE_NEW]

AS
BEGIN
```

Web-based Reporting System

- - New Development:
- - Creating a web-based report system.
- - Goal: Avoid using Alteryx and Excel exports.



		07	24-08	24-09	24-10	24-11	24-12	25-01	25-02	25-03	25-04
100001	PL-AUF										
100001	W-BEST	)5									
100002	15		700								
100002	AR-RES			-873			-1197	-1194			
100002	AR-RES_Accumulated			-873			-2070	-3264			
100002	Best_mit LT		700								
100002	BS-AVI		700								
100002	PL-AUF						3506.3	1194			
100002	W-BEST	1.7									
100003	15			700							
100003	AR-RES	6	-766	-766			-766	-766	-766	-1506	-2298
100003	AR-RES_Accumulated	1	-1537	-2303			-3069	-3835	-4601	-6107	-8405
100003	Best_mit LT		700								
100003	BS-AVI		700								
100003	PL-AUF						2101.7		3064	4544	766
100003	W-BEST	9.3									
100004	15			950.1							
100004	AR-RES	09	-2109	-1406	-1406					-2109	
100004	AR-RES_Accumulated	09	-4518	-5924	-7330					-9439	
100004	Best_mit LT	.1			1123.7						

Sense the Power

Questions and Answers

- - Open floor for questions and further discussion.