



User Guide

Auto Inventory Forecast with A.I.

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1. ABOUT



The Auto Inventory Forecast with AI application allows you to predict how much inventory you may need to meet future sales demands by looking at historical sales data and trends within Microsoft Dynamics 365 Business Central. Set how far back you want to look at your historical data and how far forward you want to predict your sales demands.

Use the Auto Inventory Forecasting application with Microsoft Azure AI Forecasting extensions to look deeper into your data and find accurate trends. The AI Forecasting extension will use calculations and statistical models to make your forecast.

For more information, please go to <https://www.websan.com/automated-inventory-forecasting-for-business-central> .

2. BASIC SETUP

This section covers the basic system setup needed to use the Auto Inventory Forecast with AI app. The steps outlined in this section should be completed prior to generating demand forecasts.

Basic Setup to Generate Forecasts Using AI

Search for Sales and Inventory Forecast Setup.

sales and inventory forecast setup

Go to Pages and Tasks

>
Sales and Inventory Forecast Setup
Administration

In the Sales and Inventory Forecast Setup window, complete the General section.

General Show less

Period Type Month ▼ Horizon 6 Stockout Warning Horizon 6 API URI https://ussouthcentral.services.azureml.ne API Key Variance % 40.00 Expiration Period (Days) 60	Historical Periods 36 Timeseries Model ALL ▼ Use for demand forecast <input checked="" type="checkbox"/> Add Safety Stock <input checked="" type="checkbox"/> Service Level 0.97 ▼ Rounding Method Nearest ▼
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The configuration settings found in this section include:

- Use for Demand Forecast (toggle) – activate to use Artificial Intelligence when generating demand forecasts.
- Period Type & Horizon – Expand the Period Type drop down list and choose the period that will be used to generate monthly, quarterly, or yearly forecasts. Then, in the horizon field, enter an integer number to specify the time horizon you want to forecast.
- Stockout Warning Horizon – Use this field to specify how far into the future you wish to look for stockouts. The Stockout Warning Horizon field works together with the Period Type field to define a stockout horizon.

- API URI & API Key – Refer to this link to get detailed instructions on how to get an API URI and API Key from Microsoft: [Azure Time Series Insights Gen2 Model APIs - Azure Time Series Insights Gen2 | Microsoft Learn](#)
- Variance % - enter a value to specify the deviation that will be accepted in a forecast. Note that this value corresponds to an interval (i.e., if user enters 10, that equals a +/- 10% variance interval). Smaller intervals will yield more accurate forecasts.
- Expiration Period (Days) – Enter a value to specify the number of days until a forecast expires.
- Historical Periods – Enter a value to specify the number of periods from which to get data for forecasts generated using AI. This field works with Period Type to specify a historical period.
- Timeseries Model – Choose the time-series model/algorithm that will be used to generate forecasts.

This completes the basic steps to generate demand forecasts.

Automated Forecasting and Safety Stock Runs

Auto Inventory Forecast with AI offers users the possibility to automate forecasts by:

- Setting up scheduled forecast runs
- Setting up scheduled safety stock update runs

To activate the scheduled safety stock feature:

1. Go to the Scheduled Safety Stock Setup section of the Sales and Inventory Forecast Setup window. Here, turn on the Enable Safety Stock Scheduler toggle.

Scheduled Safety Stock Setup

Enable Safety Stock Scheduler	<input checked="" type="checkbox"/>	Rounding Method	Up
Location Filter		Safety Stock Calculation Method	
Forecast Type	Sales Item	Last Run Completed	
Service Level	0.00	Used Processing Time (Seconds)	100 milliseconds

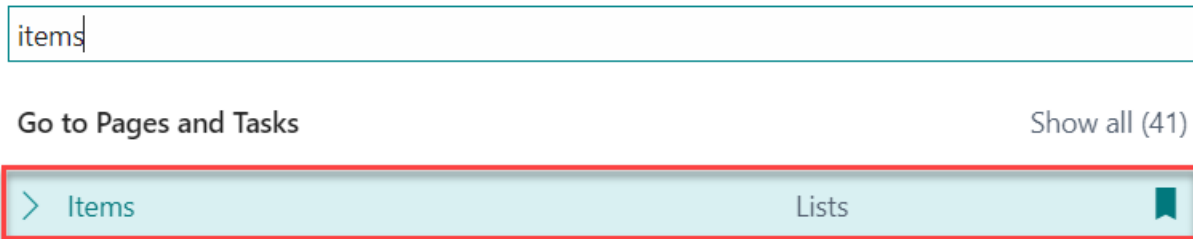
2. With the toggle activated, still in the Scheduled Safety Stock Setup section, proceed to:

- i. Enter a Location Filter to determine the location for which the safety stock update will be run.
- ii. Expand the Forecast Type drop-down menu and choose between Sales Item or Component.
- iii. Choose a Service Level from the field's drop-down list and specify the rounding method that will be used.
- iv. Select the Safety Stock Calculation Method that will be used.

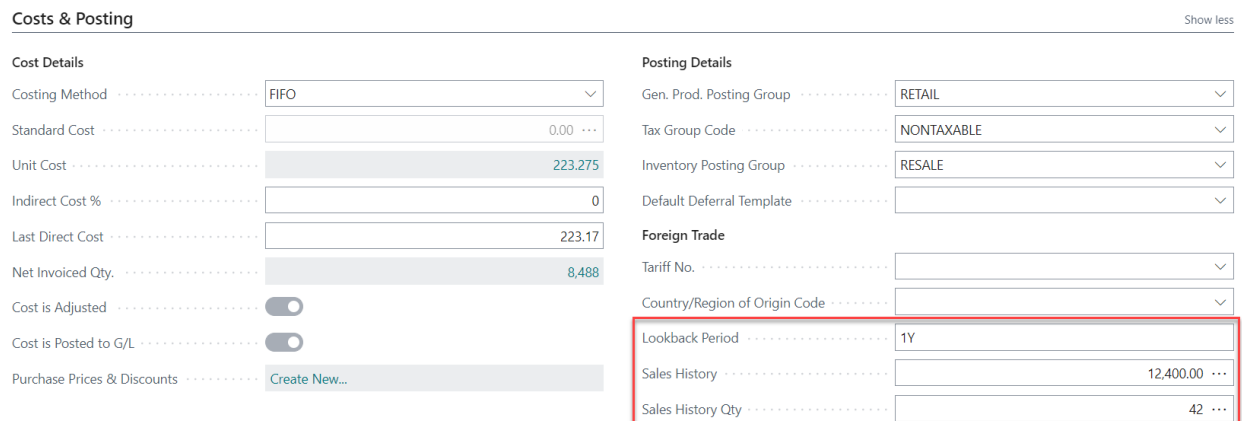
This completes the basic setup required to schedule safety stock update runs. The steps required to set up scheduled forecast runs will be covered in the Functionality section of the present user guide.

Basic Setup to Generate Forecasts Without AI

To complete the basic setup needed to generate forecasts without AI, first, search for Items.



In the Items window, select an Item to open its Item Card and scroll down to the Costs & Posting section. Here, look for the Lookback Period field and enter the period from which you wish to collect data to generate demand forecasts. Time periods of may be entered as weeks, months, or years (1W, 2M, 3Y).



Note: this is the period that will be utilized when users generate demand forecasts *without* the Artificial Intelligence (AI) capabilities provided by the Auto Inventory Forecast with AI app.

Once the Lookback Period field is populated, the Sales History and Sales History Qty fields will automatically display the corresponding data for the period.

Next, in the General section of the Sales and Inventory Forecast Setup window, deactivate the Use for Demand Forecast toggle. Lastly, click Update Forecast.

Sales and Inventory Forecast Setup

Setup Scheduled Safety Stock Setup Scheduled Forecasting Update Forecast [Open Azure AI Gallery](#) More options

General Show less

Period Type	Month	Historical Periods	6
Horizon	6	Timeseries Model	ALL
Stockout Warning Horizon	6	Use for demand forecast	<input type="checkbox"/>
API URI	https://ussouthcentral.services.azureml.net/workspaces/	Add Safety Stock	<input type="checkbox"/>
API Key	*****	Service Level	0.97
Variance %	30.00	Rounding Method	Nearest
Expiration Period (Days)	60		

3. FUNCTIONALITY

Generating Demand Forecasts

The Auto Inventory Forecast with AI app allows users to generate demand forecasts using the Microsoft Azure AI Forecasting extensions to look deeper into your data and find accurate trends.

To generate a sale forecast with AI, search for Sales and Inventory Forecast Setup.

sales and inventory forecast setup

Go to Pages and Tasks

> Sales and Inventory Forecast Setup Administration

Select the Update Forecast action button located at the top of the Sales and Inventory Forecast Setup window.

Sales and Inventory Forecast Setup

Setup Scheduled Safety Stock Setup Scheduled Forecasting Update Forecast Open Azure AI Gallery More options

This will generate a new forecast or update any existing forecast figures. At this point, you can proceed to the Reporting section of the present user guide to generate a demand forecast report.

Generating Scheduled Demand Forecasts

The Auto Inventory Forecast with AI app allows users to set up scheduled forecast runs. To activate this feature:

Sales and Inventory Forecast Setup

Setup Scheduled Safety Stock Setup Scheduled Forecasting Update Forecast Open Azure AI Gallery More options

1. Select the Setup Scheduled Forecasting button located at the top of the Sales and Inventory Forecast Setup window. This will open the Sales Forecast Update Job Queue Entry Card window.
2. In the General section of this window:

- Expand the drop-down list of the Object Type to Run field and choose between Codeunit and Report. Based on this selection, the Object ID to Run and Object Caption to Run fields will auto populate. Select Codeunit to run a forecast update; otherwise, choose Report to only produce a forecast report.
- Click on the calendar button located next to the Earliest Start Date/Time field to choose the date and time when the scheduled runs will start.
- In the Job Timeout field, enter the maximum time a job can run for.
- Users may choose to enter a customized description in the Description field – note that this field auto-populates.

Job Queue Entry Card ✓ Saved

Codeunit · 1853 · Sales Forecast Update

Process Job Queue Automate Fewer options

General Show more

Object Type to Run Codeunit	Earliest Start Date/Time <input type="text"/>
Object ID to Run 1853	Job Timeout 12 hours
Object Caption to Run Sales Forecast Update	Status On Hold
Description Sales Forecast Update	

3. Next, scroll down to the Recurrence section of the window. To set a recurrence:

Recurrence

<p>Recurring Job <input checked="" type="checkbox"/></p> <p>Run on Mondays <input checked="" type="checkbox"/></p> <p>Run on Tuesdays <input checked="" type="checkbox"/></p> <p>Run on Wednesdays <input checked="" type="checkbox"/></p> <p>Run on Thursdays <input checked="" type="checkbox"/></p> <p>Run on Fridays <input checked="" type="checkbox"/></p> <p>Run on Saturdays <input checked="" type="checkbox"/></p> <p>Run on Sundays <input checked="" type="checkbox"/></p>	<p>Next Run Date Formula <input type="text"/></p> <p>Starting Time 2:00:00 AM</p> <p>Ending Time <input type="text"/></p> <p>No. of Minutes between Ru... 1440</p> <p>Inactivity Timeout Period 5</p>
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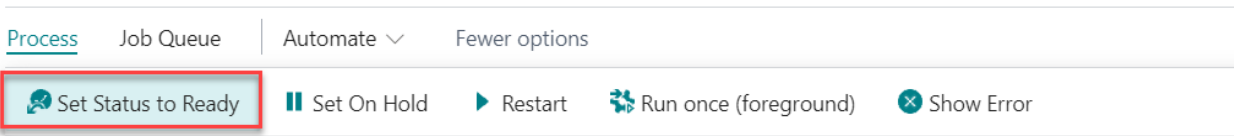
- With the Recurring Job toggle activated, activate the Run on [day] toggles as needed.
- In the Starting Time field, enter the earliest time of the day when the recurring job queue entry can be run.

- In the Ending Time, enter the latest time of the day when the recurring job queue entry can be run.
- In the No. of Minutes Between Runs, specify the minimum number of minutes that are to elapse between runs of a job queue entry (i.e., 1440 will make runs occur once a day, 120 will make runs occur every two hours). Note that runs will only occur on the days specified by in the Run on [days] toggles.

Alternatively, users can deactivate the Recurring Job toggle by entering a date formula in the Next Run Date Formula field. This will specify when the next job run should occur. Acceptable time units for this field are D, WD, W, M, Q, and Y.

4. To activate the scheduled run, at the top of the Job Queue Entry Card window, expand the Process menu, then select Set Status to Ready. To make changes/updates to jobs with a status Ready, users must first change the job status to On Hold by selecting the Set on Hold action. Additional actions include restarting a scheduled job, running a job once, and showing errors.

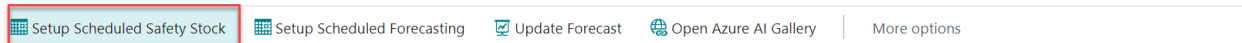
Codeunit · 1853 · Sales Forecast Update



Generating Scheduled Safety Stock Updates

To activate the scheduled safety stock feature:

Sales and Inventory Forecast Setup



1. Click the Setup Scheduled Safety Stock button located at the top of the Sales and Inventory Forecast Setup window. This will open the Safety Stock Scheduler Job Queue entry card.
2. At this point, follow steps 2, 3, and 4 of the Generating Scheduled Demand Forecasts subsection to complete the scheduling of safety stock runs.

4. REPORTING

The Auto Inventory Forecast with AI app allow users to utilize various filters to generate highly customized demand forecast reports. Users may choose to access demand forecasts in Business Central, share those reports, or download them as Excel files to perform more thorough analyses.

Generating New Demand Forecast Reports

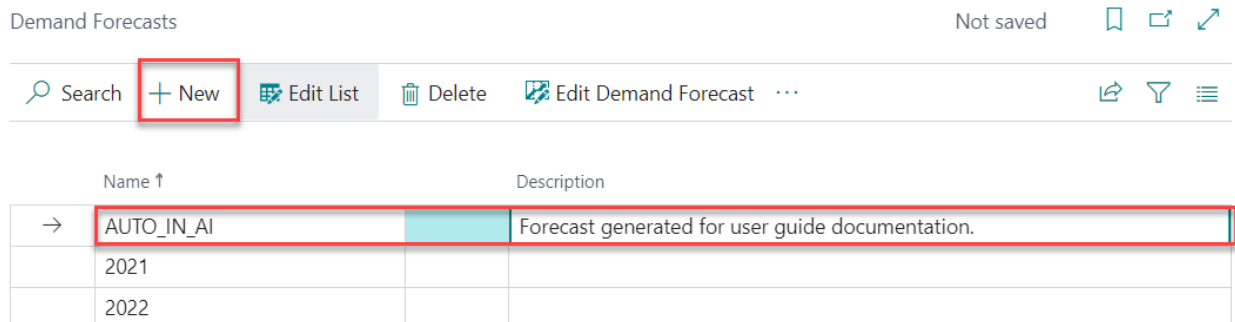
To generate a demand forecast report, look for Demand Forecasts.

demand forecasts

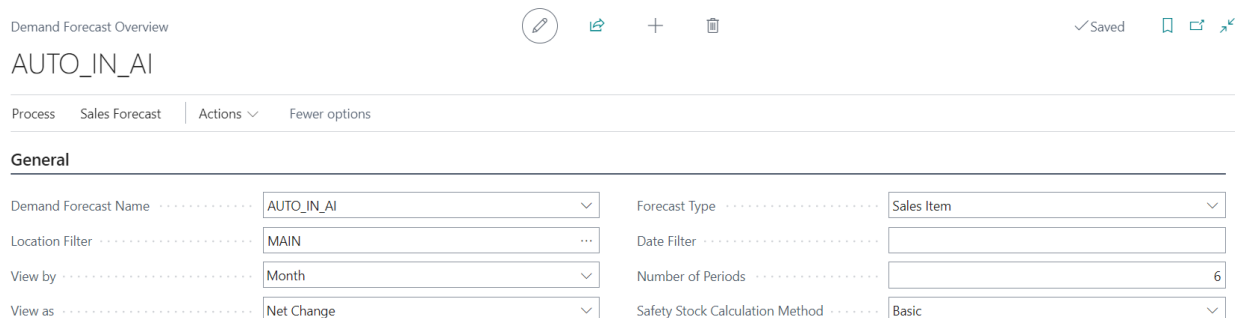
Go to Pages and Tasks



In the Demand Forecasts window, select New, enter a Name and Description, and then select Edit Demand Forecast to set up your report.



In the General section of the Demand Forecast Overview window that appears:

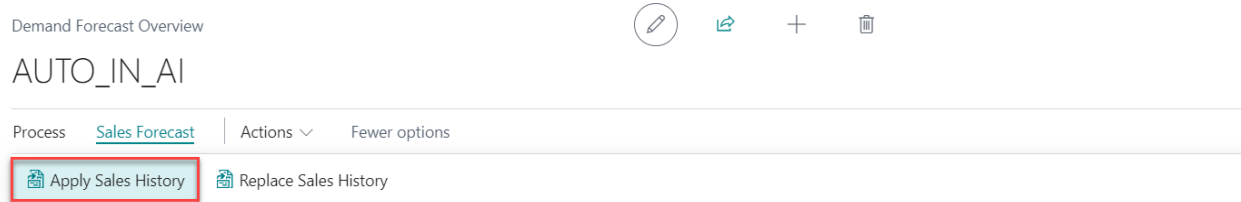


- In the Location Filter field, select the ellipsis button (...), then choose the location for which you want to generate your forecast report.
- Expand the View By drop-down list and specify the period (unit of time) that will be used to generate your report. Available options are Day, Week, Month, Quarter, Year, and Accounting Period.
- Expand the View As drop-down list to specify how the amounts will be displayed. Available options include Net Change (shows the net change in the balance for the selected period) and Balance at Date (shows the balance as of the last day in the selected period).

Note that when users select the Balance at Date option, they will need to enter a date in the Date Filter field in the following format: yyyy-mm-dd.

- In the Forecast Type field, select Sales Item to generate a demand forecast. Additional options include Component, and Both.
- In the Number of Periods field, specify the number of periods to which the sales forecast will be applied. This field works in conjunction with the View By field to determine a period. Note that user may choose to enter a number of periods that exceeds a demand forecast's time horizon if needed.

After all the filters have been applied, expand the Sales Forecast menu located at the top of the Demand Forecast Overview window, then select Apply Sales History.



The Apply Sales History action pulls the demand forecast figures and displays them in the Demand Forecast Matrix.

Note that if the Demand Forecast Matrix is already populated, when users click the Apply Sales History button, the demand forecast figures will be added to the existing amounts. This means that, if the Apply Sales History action is performed twice, the Demand Forecast Matrix will display two-times the forecasted figure for each period.

Demand Forecast Matrix 🔗 📄

No. ↑	Description	Oct 2022	Nov 2022	Dec 2022	Jan 2023	Feb 2023	Mar 2023	Apr 2023	May 2023
1000	test item	100.85041	100.85041	100.85041	100.85041	100.85041	100.85041		
1001	Service	0.03286	0.03286	0.03286	0.03286	0.03286	0.03286		
1003	NB Office Chair								
1004	NB Office Desk								
1005-N	Coffee Mug								
1006	Coffee Beans								
1007	Coffee kit	2.43243	2.43243	2.43243	2.43243	2.43243	2.43243		
1008	assembly on stock								
1009	PAXIS COFFEE MUG								

To replace the figures from a previous forecast, simply expand the Sales Forecast menu, and select the Replace Sales History button. This will allow users to display only the most recent forecasted figures.

Demand Forecast Overview 🔗 📄 + 🗑️ ✓ Saved 📄 🗑️

AUTO_IN_AI

Process Sales Forecast Actions ▾ Fewer options

Apply Sales History
 Replace Sales History
🔗

Demand Forecast Name: AUTO_IN_AI Forecast Type: Sales Item
 Location Filter: MAIN Date Filter:
 View by: Month Number of Periods: 6
 View as: Net Change Safety Stock Calculation Method: Basic

Downloading Demand Forecast Reports

To download a demand forecast report, go to the Demand Forecast Overview window, scroll down to the Demand Forecast Matrix section, click on the Share button, and then select Open in Excel. An Excel file containing the most recent demand forecast will be downloaded to your preferred location.

Demand Forecast Matrix 🔗 📄

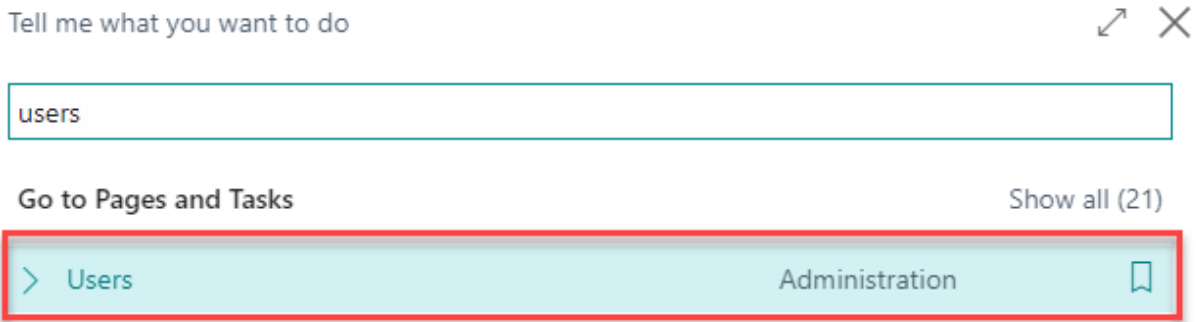
No. ↑	Description	Oct 2022	Nov 2022	Dec 2022	Jan 2023	Feb 2023	Mar 2023	Apr 2023	May 2023
1001	Service	0.16	0.16	0.16	0.16	0.16	0.16		
1003	NB Office Chair								
1004	NB Office Desk								
1005-N	Coffee Mug								
1006	Coffee Beans								
1007	Coffee kit	7.6	7.6	7.6	7.6	7.6	7.6		
1008	assembly on stock								
1009	PAXIS COFFEE MUG								
1010	PAXIS COFFEE BEAN								

5. SECURITY

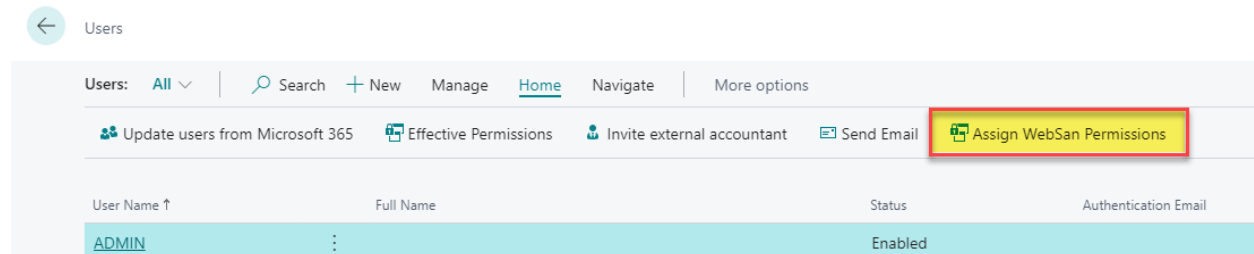
The Item Attributes for Dynamics 365 App, along with the rest of WebSan Inc.'s Dynamics 365 apps, have a built-in AutoPermission security functionality. When a user with the proper credentials installs an App, the AutoPermission function automatically triggers and assigns or updates the user's permissions. No other action is needed from the user.

When a user without the proper credentials installs an App, the AutoPermission function allows the installation, but user permissions are not changed. In this case, a user with the proper security credentials can change the user's permissions later.

To change user permissions, search and go to the User list.



In the Users window, select Assign WebSan Permissions to assign all users the WebSan Permission Set.



6. REGISTRATION

To register a WebSan Inc.'s application, in Business Central, search WebSan Client Information and select WebSan Client Information – Administration.

Tell me what you want to do









websan client information


Go to Pages and Tasks

> WebSan Client Information Administration

In the WebSan Client Information window, enter your company's contact and billing information. After your information is complete, select Transmit Data.

  +  ✓ Saved   

WebSan Client Information

 Transmit Data

General

MS Client ID On Hold

Active

Contact Information

Company *	<input type="text"/>	PostalCode / ZipCode *	<input type="text"/>
Name *	<input type="text"/>	Country *	<input type="text"/>
Address *	<input type="text"/>	Phone	<input type="text"/>
Address2	<input type="text"/>	Email	<input type="text"/>
City *	<input type="text"/>	Email CC	<input type="text"/>
Province / State *	<input type="text"/>	Billing is Same as Co... ·	<input checked="" type="checkbox"/>