

MANAGEMENT SUITE



Virtual machine monitoring technology



ANCA
CNC MACHINES

Management Suite

ANCA's new smart factory Management Suite.

Virtual machine monitoring technology to achieve premium grinding efficiencies – in or out of the office.

ANCA launches an industry game changer software suite that will enable customers to monitor the overall efficiency and productivity of their machines from the office or anywhere in the world. This software suite will also allow customers to have better control of their grinding files, wheel packs and wheel inventory.

ANCA's new Management Suite will enable customers to monitor the operational performance of their machines and provide live production and machine data to make informed operational improvements.



Benefits to customers

Production efficiency and machine monitoring is very critical to sustain profitability and be competitive in the modern world. Businesses who have the systems in place to achieve this can definitely be a step ahead of their competitors. Management Suite is a real game changer for the CNC grinding industry, enabling customers to monitor operational performance of their machines and live production data to make informed operational improvements.

All three features will require user login and account management. The company's administrator can create users with different access levels. REDAX has its own login system to control machine management and notifications.

1. REDAX (Machine and Production management)

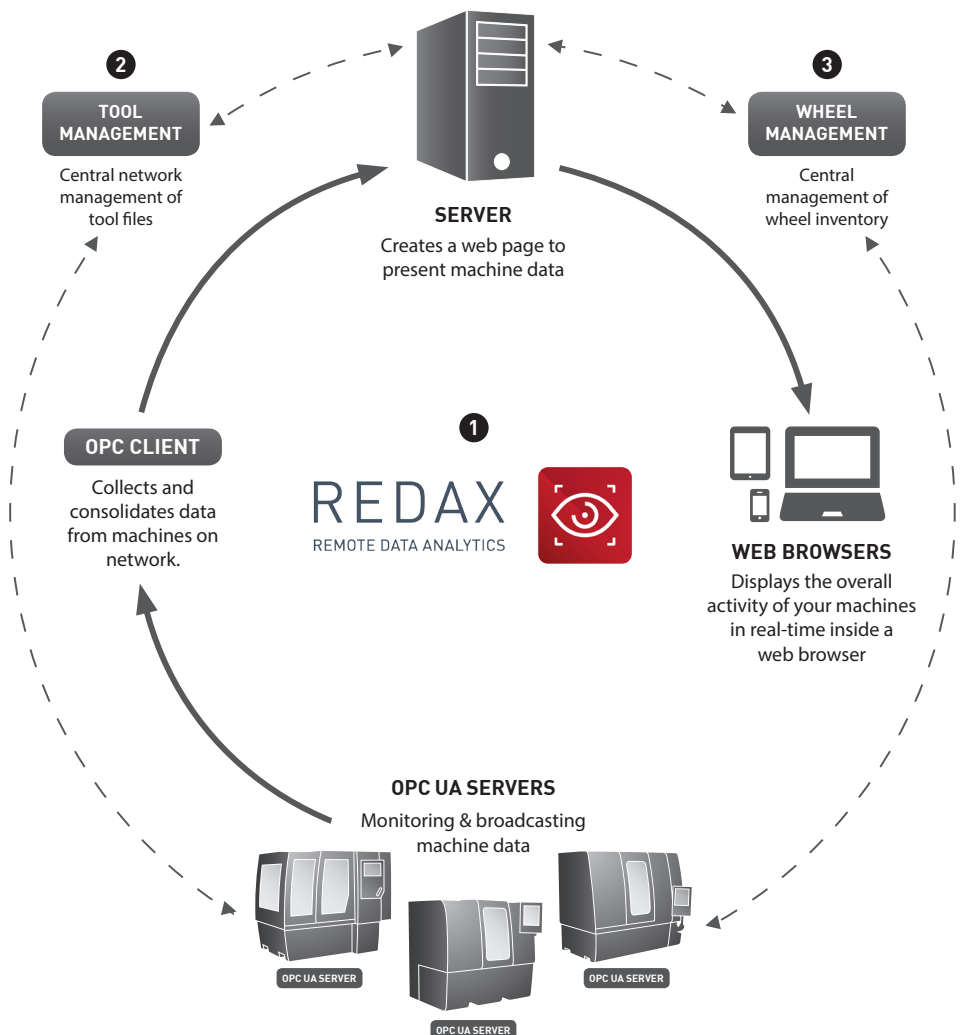
- Monitors machine and production in real time and deliver up to date information, greatly enhancing visibility and control in the manufacturing operation.
- Reduces machine downtime by immediate notification of a machine ceasing production with reasons for stoppage as an email or SMS to the relevant personnel or group.
- Complete visibility of the machine status and activity from your office PC or from anywhere in the world if you are logged into the company's server.

2. Tool Management (server based)

- Central network management of grinding files.
- Revision control and comparator viewer tool for comparison with master files.
- Different access levels for different of company personnel for better control of grinding files.

3. Wheel Management (server based)

- Provides a means to easily share wheel packs and qualification data between machines.
- Search/Filter facility.
- Simulation/Machine qualification state where protection is provided to prevent wheel packs qualified on simulator from being used on a machine to avoid damages to wheels and machine.



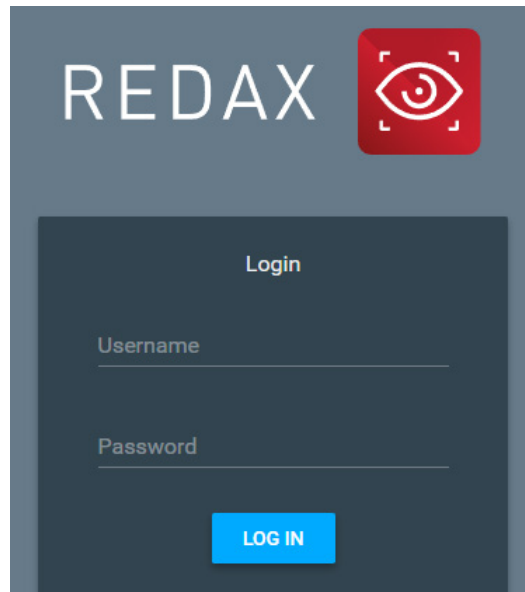
REDAX (Remote Data Analytics)

REDAX is a real time monitoring solution for machines which consists of two main features.

- The OPC UA (open platform communication unified architecture) servers running on machines can monitor and broadcast machine data.
- REDAX or Third party OPC compatible client which collects and consolidates this data to create a web page to display in a real time web browser.

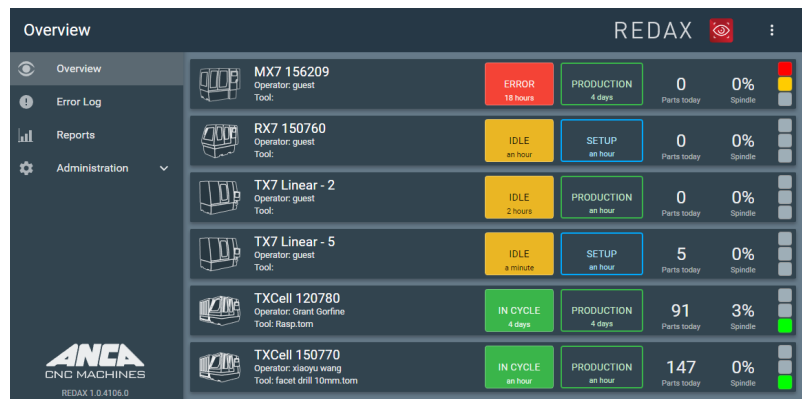
User Login

REDAX server is accessed through the web browser with a login username and password. The administrator menu is only available when logged in as an administrator and can add machines and control.



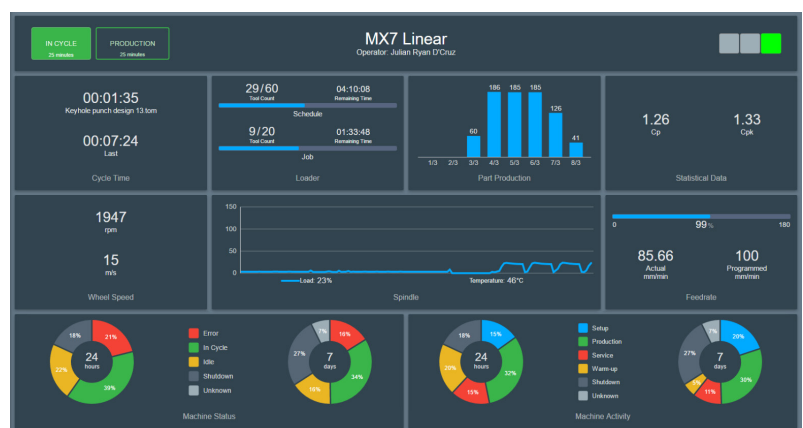
Factory Overview

- Provides an overview of all the machines on the factory floor.
- Provides real time information about tool name, machine status and activity, number parts produced per day, spindle load, operator name and also the status of tower lights.
- It also displays the amount of time spent on machine and operator activity.
- Displays a message when a machine is disconnected from REDAX server due to shut down or network disconnection.



Machine Dashboard

- Detail tool and operation information, feedrates and wheel speeds.
- 24 hours and seven days charts for machine status and activity.
- Number of production parts/day over a week chart.
- Cycle time, tool counts and remaining batch times for loadermate schedule and job.
- Spindle load graph and CP/CPK display



Error Log

- The error log page displays the 20 most recent log messages when the page is first accessed.
- Search errors has search string to filter error. Errors containing the search string in the error description and title will be listed. The search is not case sensitive.
- The machines that failed to provide errors, due to machine shutdown or network connectivity are listed at the bottom of the error list.
- Errors can be viewed in native language by selecting the multiple language from the drop down menu.

All machines Q Search errors ⌕			
5/23/2017 11:44 am			
Machine	Type	Date	Description
> TXCell 150770	Warning	May 23, 2017 10:41 AM	Emergency stop condition (ALM 0105): Operator panel emergency stop ...
> TXCell 150770	Warning	May 23, 2017 10:40 AM	Emergency stop condition (ALM 0105): Operator panel emergency stop ...
> TXCell 150770	Warning	May 23, 2017 10:25 AM	Emergency stop condition (ALM 0105): Operator panel emergency stop ...
> TXCell 150770	Log	May 23, 2017 10:24 AM	Application: LoginUtility Error: ConnectException Level: 5 Displayed: fals...
> TXCell 150770	Log	May 23, 2017 10:24 AM	Application: LoginUtility Error: CommunicationErrorException Level: 3 Th...
> TXCell 150770	Log	May 23, 2017 10:24 AM	Application: LoginUtility Error: ConnectException Level: 5 Displayed: fals...

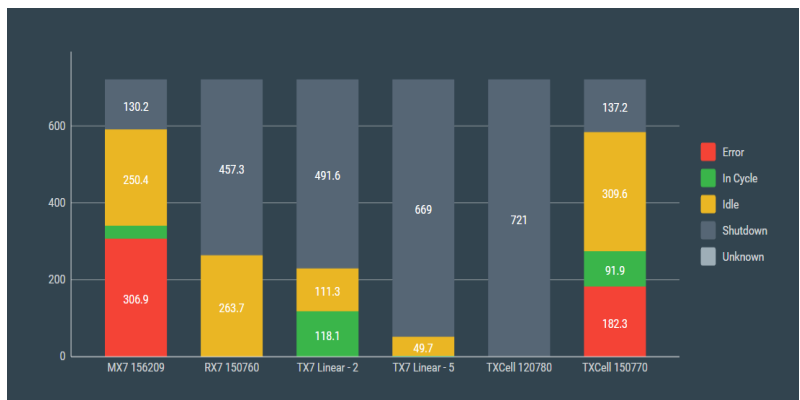
Reports

- REDAX server can generate the following types of reports and can do this at pre-defined periods or user specified dates from the drop down menu.

Machine Activity (%)
Machine Activity (hours)
Machine Status (%)
Machine Status (hours)
Part Production
Part Production History

Today
Yesterday
This Week
Last Week
This Month
Last Month
This Year
Last Year
Custom

- By default, all machines are selected for reporting but an option is available from the drop down menu to select only required machines.
- Once the report type and other report filters are set reports can easily be generated by using the generate report button.
- Generated report data can be exported to CSV format or can be printed from the report page.
- On the right is an example of a machine status report generated from REDAX.



Email and SMS notifications

- Notifications can be sent by email or SMS to nominated recipients and can be configured by an administrator.

Tool Management

History: P:\toolroom\user\tools\ENDMILL.tom

Version	Author	Comment	Commit time
1	thomson	first test - Standard tool	Thu Jan 19 10:26:01 AEDT 2017
2	thomson	Endmill - second test	Thu Jan 19 10:28:44 AEDT 2017
3	thomson	endmill - third test	Thu Jan 19 10:29:30 AEDT 2017

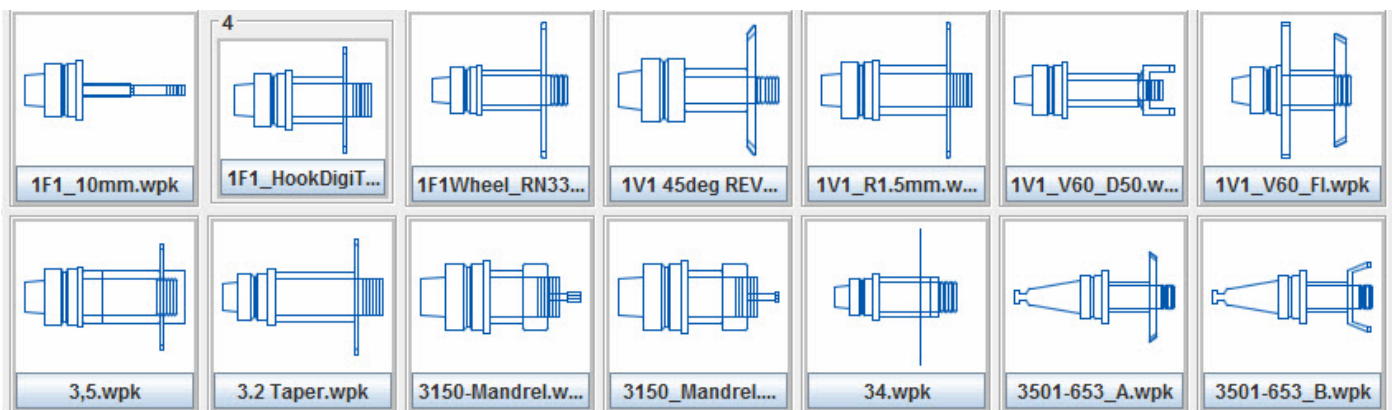
- Tool Management is a server based central network for the management of grinding files.
- It has the ability to maintain revision control to identify changes from the master file and can visually compare between two grinding files through the file difference viewer.

File Difference Viewer

Operations	Flute from Solid	Endface Gash	Endface Gash	Endface Finish	Endface Finish
	version_1.tom	version_2.tom			
EOT radial land	2.0 mm	1.5 mm			
Final Core Diam	5.4 mm	5.5 mm			
Shank radial land	2.0 mm	1.5 mm			

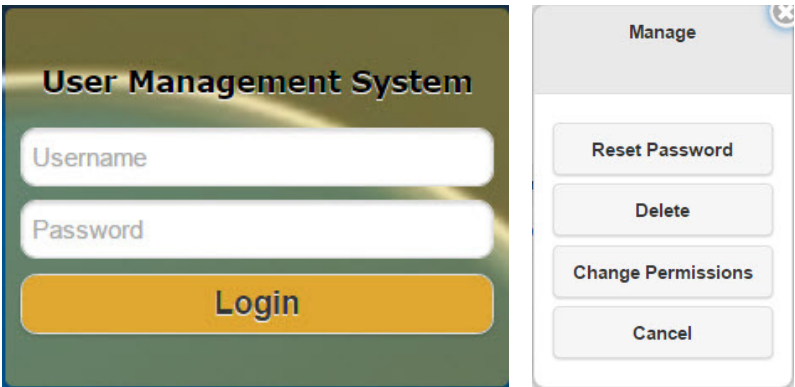
Wheel Management

- The Wheel Management is a server based central inventory for wheels and wheel packs.
- It provides a platform to easily share wheel packs and qualification data between machines.
- It has a handy search function so that operators can easily find wheels and wheels from the library.
- Another key feature of the Wheel Management is the differentiation between simulator/machine qualified wheels which will prevent the usage of simulator qualified wheels on machines to avoid collisions and damages to machine and wheel packs.

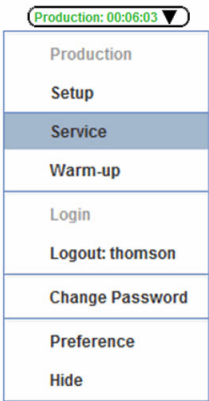


User Management

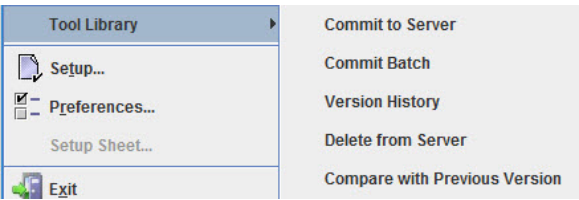
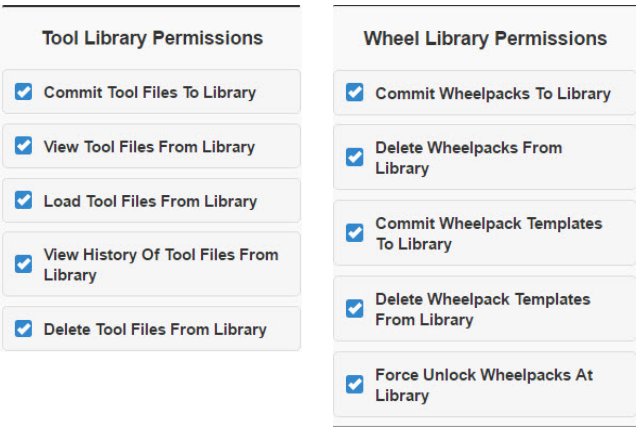
The user management system for the Tool and Wheel Management will allow the administrator to create users with different access levels and permissions.



- The login for operators are controlled through an operator portal on the machine screen where they can access the tool and wheel library from iGrind or wheel editor.
- The change in the machine activity through the operator portal will also be reflected on the REDAX overview page.



The tool and wheel library has its own permission settings which will allow better management of all grinding files and wheel files by the administrator or the supervisor.



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