



ErgoPro Technology Points

Confidential

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1 Introduction

This document outlines the technology considerations for the ErgoPro workstation assessment system.

The intention of this document is to provide the customer with the information required to demonstrate that industry best practice has been employed with the development and is employed with the ongoing operation of the system and that such ensures the integrity, security and privacy of data held.

2 System Overview

The ErgoPro workstation assessment system provides a web based workstation assessment, administration and reporting system.

Workstation assessment data capture is web based. A web based administration module is supplied which allows access to view and update user records and add new users. Administrator access is by user name and password.

The administration module also contains a suite of reports which allows data to be exported to MS Excel.

The *Workstation Assessment System Administrator User Manual* covers the process of user interaction with the workstation assessment and administrator modules.

3 Hardware and Software Requirements

3.1 Workstation Assessment

- Microsoft Internet Explorer or Mozilla Firefox web browser
- An email client (e.g. Microsoft Outlook, Lotus Notes) to receive workstation assessment requests and follow-ups
- Adobe Acrobat PDF Viewer to view solutions
- Minimum recommended screen resolution is 800x600

3.2 Administration System

- Microsoft Internet Explorer or Mozilla Firefox web browser
- An email client (e.g. Microsoft Outlook, Lotus Notes) to receive email alerts
- Microsoft Excel to view reports (alternatively, Microsoft Excel viewer is available free of charge to download from the Administrator Help page)
- Adobe Acrobat PDF Viewer to view solutions
- Minimum recommended screen resolution is 1024x768. Although the administrator system can be used with 800x600 screen resolution, some horizontal scrolling will be necessary.

3.3 Bandwidth

The workstation assessment can be completed over a low bandwidth connection such as 'dial-up'. A DSL / Broadband connection or similar is recommended for the administration system because there can be large amounts of data involved when performing searches or viewing workstation assessment records and reports.

4 Introduction to Technical Infrastructure

4.1 Operating System

- Windows Server 2003
- SQL Server
- Enterprise level hardware with SCSI RAID 1 configuration

4.2 Code Base

The system is written using ASP with some client side scripting in JavaScript and browser rendered using standards compliant XHTML and CSS. Application hosting is provided by our Microsoft Gold Certified partner, one of only six application Infrastructure providers in the world with this accreditation.

Because the system is web based it can readily be updated if required to adapt for any future business or technical changes. A separate instance of the system is utilised for each customer, thereby allowing bespoke requirements to be implemented without affecting other instances of the system. Future changing requirements can be catered for by deploying new features with the minimum of disruption to users.

4.3 Security

The system and hosting infrastructure is independently penetration tested for vulnerabilities. The code base and web server has been designed to remove vulnerabilities such as Cross Site Scripting (XSS) and Cross Site Request Forgery (CSRF). More detailed information is available on request.

5 Service Strategy

The Workstation Assessment System was launched in 2005 after extensive beta testing and is now in use at over 50 (as at 06-04-20) locations.

The second version (v1.5) released in April 2006 incorporates an improved user interface, additional administrator reports and 3D rendered images to support the training material.

Further enhancements that become available will be offered to all customers and they may either be free of charge or offered as a cost option.

6 System Management

6.1 Technical Support

Technical support is provided on a second-line basis (e.g. users contact their normal company technical support representative, who contacts ErgoPro if necessary). Technical support from ErgoPro is available during office hours, 9am to 5pm. The technical support number is 01323 418153, fax 07005 930688 and email support@ergopro.co.uk

6.2 Service Level Agreement

A separate service level agreement details the agreed response times.

6.3 System Maintenance

Planned maintenance is carried out after normal offices hours. It is rare for maintenance to affect live usage but in any event 24 hours notice is given of any such maintenance in case customer staff are intending to access the system out of hours.

6.4 Performance Monitoring

24/7 monitoring of the service is in place and in particular, the following are carefully monitored: server load; database capacity; security; basic hardware and software operation. A service check is performed every 5 minutes and any failure is attended to immediately. In the event of a hardware failure, a fix is guaranteed within 1 hour. There has never been an instance of unplanned downtime of the Workstation Assessment System and our hosting partners report no network downtime in the last 5 years.

Changes to the system operation or design will only be in conjunction with and with the agreement of the customer and notice of any changes will be by agreement, the notice period agreed depending on the nature of the change.

7 Quality Assurance and Service Monitoring

Incoming service and support requests are handled in line with the service level agreement.

Support requests and results are logged and an internal review takes place on a monthly basis to identify potential procedural and system improvements.

A regular review will take place to discuss feedback and this will be added to the agenda for customer service review meetings.

8 Security and Privacy

8.1 Developer access controls

Ciscom developers each have password controlled access to source code and database for development and maintenance purposes. Only those developers working on the workstation assessment system are allowed access to the workstation assessment code base and database infrastructures. Access user name and passwords are changed on all areas of the system infrastructure in the event of a staff member leaving or if a staff member is no longer involved with the workstation assessment system.

Under no circumstances are staff permitted to update or amend customer data held on the database. An audit trail is provided by database login and in the case of code base, through developer version control software.

All system maintenance and development requires the approval of a Company Director. Any such approved maintenance or development is tested and signed off by a Company Director before deploying to a Test system for customer approval and Live once the customer has signed an acceptance form.

Ciscom staff are contracted to treat all work and associated client information and material as confidential. All staff including developers have signed non-disclosure agreements as part of their employment contracts. Ciscom Internet operates a small development team and roles and responsibilities are tightly controlled.

8.2 User Access

There are two types of end user:

8.2.1 Employee (called 'user' in the administrator manual)

User access is controlled by user name and password. The user name is normally the user's email address. The password is an automatically generated alpha numeric eight digit sequence. The user name and password are automatically sent to the user by email when they are added to the system. The user login allows access to an individual workstation assessment record, along with the user's name, email address, staff ID and department/location details.

8.2.2 Administrator

Administrator access is by user name and password. Both are selected by the customer and can be changed at any time via the administration system. The administrator user name and password allows read only access to workstation assessment results, read/write access to workstation assessment notes, read/write access to the user records and full access to other functions such as reports, add user and follow-up emails.

8.3 Hosting

8.3.1 Secure data centre features

- No public access
- Video Surveillance
- On-site security staff
- Biometric security entrance
- Pass cards entry to data room

8.3.2 Network Security

- Cisco Firewall
- Cisco IDS
- Automated Security Patching
- Patches for critical vulnerabilities and exploits. Early warning courtesy of hosting partner's Microsoft Gold partnership
- (if reboot is required, this will be carried out between 1am and 5am)
- SSL encryption – the system can operate over a secure connection if required by the customer

8.3.3 Service Integrity Features

- Power System Backup
- N+1 redundant with instant failover from primary
- Multiple diesel generator backup
- Data centre power feed from dual sub-stations

9 Data Management

9.1 Data Capture

9.1.1 Upload

Upload of employee details can be made individually by the administrator/s using the web based administration system. Bulk initial upload of users can be achieved by passing the data to ErgoPro for bulk upload to the database. Transmission of the data can be by secure shell or similar means if required.

9.1.1.1 Staff Record Data Fields (* denotes required)

- First Name *
- Surname *
- Staff ID
- Cost Centre **
- Location **
- Floor **
- Department **
- Desk ID
- Job Title
- Employment Status (Permanent/Temporary)
- Email Address *

It is recommended that at least one of the fields marked ** is utilised in order to filter staff searches and reports into manageable and useful data sets.

It is recommended that desk ID is used to identify which workstation was applicable at the time of workstation assessment.

After initial bulk upload it is anticipated that the customer will handle ongoing user record maintenance through the web based administration system. New users or changes can be added by bulk upload or individually through the ErgoPro admin system.

9.1.2 Download

Download of data is by use of the administrator reporting system which can be used to export data to MS Excel via ten different report formats. If additional data export is required then this can either be added via a system change request for additional administrator report, or extracted to required format on a one-off basis by ErgoPro running a database query.

9.2 Data Integrity features

Data integrity is one of the most important aspects of the system infrastructure because it is important that the workstation assessment results are available for inspection in the event of audit or employee action. Records are always available as described above under 'download of data'. Data integrity is ensured by the following system infrastructure:

- SCSI Raid 1 configuration
- Full Weekly backup to tape drives
- Daily Differential backup
- 2 Week Retention

10 Maintenance and Support

The ErgoPro workstation assessment system is wholly owned, developed and maintained by Ciscom Internet. There are no third party software elements or licences involved, except as required for the network infrastructure.

Network infrastructure is provided by our hosting partner, a Microsoft Gold Certified UK hosting company. A service level agreement is in place and the key elements of the agreed service are described under the relevant headings above. Critically, the service has 100% uptime guaranteed and this has been proven with no network downtime in the last 5 years. In the event of hardware failure, faulty components are guaranteed to be replaced within one hour.

All other maintenance and support is provided by Ciscom Internet staff.

11 Service Performance

11.1 Uptime

There has been no downtime since launch of the ErgoPro system, apart from planned out of hours maintenance. Our hosting partner has had no downtime in the last 5 years.

11.2 Network Capacity

Network capacity is currently running at 10% of capacity during peak periods and will be increased as demands require it. Specifically, capacity will be increased when it reaches 30% at peak periods. Capacity allows for the spikes in traffic that can occur after an initial round of workstation assessment invitations are sent.

11.3 Network Response

Response times are independently monitored. Target response times are as follows:

Connection Time (sec.)

DNS	Connect	First Byte	Total Response
0.009	0.088	0.177	0.177

12 Business Continuity Planning

Day to day customer support is provided by ErgoPro from their Sussex location or by the reseller. Technical support is provided by Ciscom Internet in Sussex. In the event of key staff becoming unavailable, there is backup available at each location.

We operate off-site hosting for the ErgoPro system. The disaster recovery and business continuity planning for the data centre is covered above.

13 Implementation Project Plan

13.1 Project Contacts

The technical contact is: Iain Brogden (Ciscom Internet)

13.2 Project Plan

[Implementation plan to be agreed]

14 Warranty

It is agreed that the provider will give warranty of works for 12 months from the date of acceptance of the installation in its entirety. The proposed system shall not become redundant or superseded within 12 months of the installation.