

EControl Portal 3.1

Monitoring down to the smallest details

Server based computing brings back many aspects of the Mainframe era. Because applications run centrally on a farm of Windows servers, any server problem immediately influences large numbers of users. For example, in a farm of eight servers where each server handles 50 simultaneous SAP users, the failure of a single server results in 50 users losing their session or suffering a drastic drop in performance.

Monitoring is extremely important, not only to prevent problems arising but also to report on achieved performance against Service Level Agreement performance objectives. EControl Portal is a monitoring environment for server based computing. The term 'portal' in the name clearly hints at the web based nature of this product, where the browser is used to gain access to the functionality of the application: monitoring and detecting problems with MetaFrame servers and the entire direct and indirect infrastructure that is involved. Historical monitoring data is stored, making it easy to perform a trend analysis on the use of the servers and the services that run on them, for management reports for example, or for checking whether or not your server based computing servers are approaching their limits. EControl Portal is an unusual product for two reasons: the application was developed in the Netherlands (by Internet Control Services in Capelle aan den IJssel) and uses Linux as the underlying operating system.

The servers in the farm are obviously not the only systems that play an important role in allowing users to work with centralised applications. Windows Domain Controllers, and in some cases separate DNS servers, are needed for logging in. You may use a load balanced web server for accessing purposes. Or a configuration using MetaFrame XP with separate Data Collector servers and a separate database server for the IMA store. SAN or NAS file servers may well be used to store user profiles and user data. And a print server is needed for managing printing tasks. Not to mention all the intermediate network components like routers and switches. It is advisable to con-

tinually measure the performance and availability of your multi user Terminal Servers and the MetaFrame server in order to ensure that acceptable levels are maintained. If any goes wrong, you want an immediate and automatic warning. And this is also true of all the other systems and components that are needed for the Terminal Server production environment. EControl Portal is capable of monitoring all these components and services.

Installation

EControl Portal runs on a Linux server equipped with an Apache web server. You can install Linux yourself, have it installed by the supplier of EControl Portal or buy hardware that is sold with Linux included. Various Linux distributions are supported by the manufacturer, but our test shows that distributions that the manufacturer does not explicitly support can also be used. Because EControl Portal is web based, Apache 1.x or 2.x has to run on the server. The use of Linux to monitor Terminal Servers and perhaps MetaFrame and other Windows servers may seem odd, but is of course of no material importance for the application. Once Linux and Apache have been installed, you don't have anything more to do with the operating system and the whole system runs as a closed appliance (or black box). Installation takes place from the Linux command line, followed by a number of questions that you have to answer, such as the name and email address of the EControl Portal

Enterprise Control Portal 3.1

Manufacturer	» Internet Control Services B.V.
Website	» http://www.econtrolportal.com
Price	» Recommended price: depends on what you monitor, but amounts to about 1000 Euros per server on average, including one year's maintenance.
Pro's & Con's	+ Based on Linux; Very easy to use after initial setup; Flexible and suitable for much more than just server based computing; Stand alone 'thin' product - Based on Linux; Documentation is average to poor; Graphical interface sometimes confusing and leaves some room for improvement



Administrator. One disadvantage is that you need to have an online link with a mail server at the outset in order to complete the installation. This can be your company mail server (even when hosted by a third party) or your provider's mail server. There will be no problems as long as the mail server understands SMTP.

Configuration

From this point on, you can administer and use EControl Portal from any work station with a browser (and Java). The first thing you need to do is to create the so-called Monitor Domains. These are the specific portals on the web server for defined groups of systems, components, services, users or even support departments or groups. By setting up a Monitor Domain, you effectively determine what is monitored and by whom. For example, if you have a separate group of employees that look after Windows system administration, you can flag problems through to them by setting up a Monitor Domain for all the Terminal Servers and directly related machines. ASPs can for example create a Monitor Domain per customer, to report each customer's system usage. A Monitor Domain offers three login options. There is an account for the Administrator, who can create and change settings, delete data, change passwords, etc. Then there is a guest account that allows data to be viewed (including historical data) and finally there is a monitor account (for use by the help desk for example). Each Monitor Domain requires its own EControl Portal licence.

Once a Monitor Domain has been created, you then need to define what you want to monitor. Think carefully before proceeding, as trying to measure too many different things will lead to an avalanche of escalations that defy analysis. Because the names that you choose now will be used later for sorting onscreen data and in reports, it is sensible to standardise on the names used within your company. EControl Portal allows you to monitor standard services, such as FTP, HTTP, DNS, POP and so on, and login services like Radius, HTTP etc. Regrettably Windows NT and 2000 Domain Login have not been included, but these can still be monitored using a roundabout method. The 'ping' feature is extensively used just to check whether or not systems and components are accessible. The ability to monitor content is also very handy. This allows you to monitor the availability of web pages, forms on web pages and suchlike. Meaning that even when the web server is up and running (can be 'pinged') and the web service

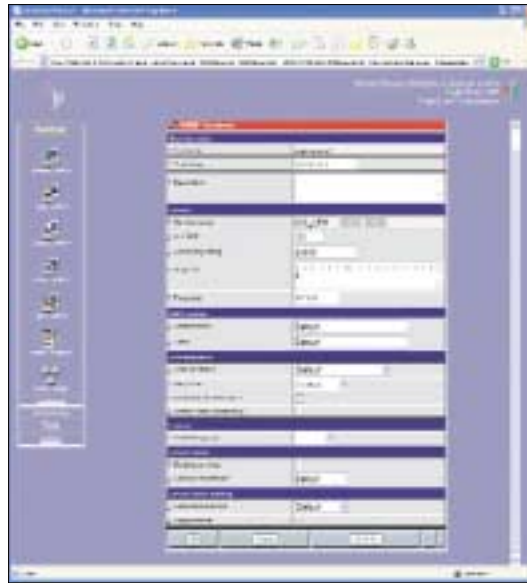


Figure 1 » Setting up SNMP monitoring on a server

is active, underlying problems with erroneous pages can be monitored. If you want, you can even keep an eye on share values, traffic jams, etc. on web servers on the internet. Obviously you can also monitor anything and everything that communicates using SNMP, ranging from routers and switches to servers. Where the standard facilities are found to be inadequate, experienced administrators can write their own scripts to monitor virtually anything. This is particularly useful if you want to monitor the operation of specific Unix applications. Having defined what you want to monitor, monitoring frequency and who should be informed of problems, the product is ready for use.

Monitoring Terminal Servers

Because by no means all the relevant (performance) data from Terminal Server and MetaFrame are transmitted using the SNMP that is available as standard, you can download and install a free SNMP extension from <http://www.wtcs.org/snmp4tpc>. If you use MetaFrame 1.8, you will also need a (free) SNMP extension in order to gain access to data specific to that product. MetaFrame XP does feature a comprehensive SNMP. After the upgrade you will have access to a sea of data about Terminal Server and MetaFrame: information about sessions, users, CPU capacity usage and so on. You are warned as soon as maximum settings are exceeded, so that you can intervene in time. For example, if you have configured a server for an average of 20 users, notification of a structural increase in the number of users is helpful.

Or, even better, you can use periodical trend analysis to monitor the number of users proactively.

Analysis and reporting

Besides monitoring and escalating data, you can also view and analyse information and produce detailed trend analysis graphs. A few weeks after an application has been added, you can easily and simply produce an analysis showing the impact of the new application on server resources. Daily measurement data is stored until you decide to purge the files. While the readings accumulated over a week or a month are often sufficient for analysis, daily measurement data takes up so little storage space that you can keep the information on file without running into capacity problems. A year's worth of data for an extensive implementation with several servers and frequent readings will only take up between 15MB and 25MB. If you delete the daily readings and only keep the monthly summaries, the data files will take up substantially less space. The Linux system itself does not require backing up as the readings can be transferred periodically to an ftp server or mailed to a system administrator at the touch of a button.

Using EControl Portal

The user interface is sometimes a little confusing and there is room for improvement in some areas. It takes a while to find out exactly what each field does in the web interface. And finding out where each function is located can sometimes be time consuming. Fortunately each field has its own brief popup text that helps you proceed. Each login level has its own button bar with the available options on the left-hand side of the screen. This button bar uses overlays with label tabs, so that you can still see the other functions from the display you have selected. The settings or analysis graphs are shown on the right-hand side of the screen. When creating graphs, you are totally free in your choice of servers and the service performance measurements you want to view. Standard reports in tabular form can be mailed periodically to update you on server performance automatically and with a minimum of effort. And because EControl Portal is a web application, it can be operated from any workstation with a browser.

On balance

EControl Portal functions independently and without the Agents or client applications on servers and components that various other monitoring applications require (Big Brother is an example). In one, or at the

most two days, you can create a monitoring infrastructure, which keeps an eye on your entire system, escalates problems and proactively controls your Terminal Server and all the other systems and components you are using. This means that EControl Portal can be effectively used not only by relatively modest businesses with a number of different locations but also by very large businesses with multiple servers and services. Being 'stand alone' reduces implementation time significantly; there is no need to fit the program into a network management framework and EControl Portal requires no interdependencies with other network services or servers. The actual process of taking readings is very 'thin',

meaning that even a slow interface will still offer satisfactory performance. The measurement data itself takes up hardly any disk space. And even if you don't actually use server based computing, EControl Portal can still be of value to your company.

The package can measure all kinds of different parameters, but you do obviously need a good basic knowledge of operating systems (services in particular) and networks (TCP/IP topics such as SNMP are important). Unfortunately there is no manual, so you have to make do with the PowerPoint presentation on the cdrom and the online help function. However improved documentation is being worked on.

The fact that you need Linux to run the application is both an advantage and a disadvantage. You save on a Windows server licence, but have to have a working knowledge of Linux if you want to manage this area in-house. EControl Portal is a typical server application for which Linux is particularly well suited. ☒



Figure 2 » CPU and memory of a MetaFrame Server



Figure 3 » Actual Status of a server farm