Perforce vs. ClearCase

Why Switch to Perforce Today?

ClearCase is very expensive to buy, support, and maintain. Even a small installation requires multiple highly skilled and well-paid administrators. When you consider the ongoing loss of productivity of ClearCase users given its slow performance and complex tooling, ClearCase is even more expensive.

Perforce Software Version Management offers a compelling solution for those looking to regain lost productivity and move toward Agile and continuous styles of software delivery. Perforce also offers dedicated technical support and a professional services team to ensure that your migration to Perforce is as low impact as possible.
SUMMARY

ClearCase is a legacy SCM system that has changed hands many times, from Atria to PureAtria via Rational to finally come to rest at IBM.

ClearCase is very expensive to buy, support, and maintain. Even a small installation requires multiple highly skilled and well-paid administrators. When you consider the ongoing loss of productivity of ClearCase users given its slow performance and complex tooling, ClearCase is even more expensive.

Most importantly, IBM has put ClearCase on maintenance. Expect to see zero ongoing innovation and improvement in ClearCase. With ClearCase, you are paying a lot upfront for outdated technology that is equally cost prohibitive to use and maintain.

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## COMPARISON MATRIX

<table>
<thead>
<tr>
<th>Capability</th>
<th>ClearCase</th>
<th>Perforce</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Performance</strong></td>
<td>ClearCase uses a proprietary file system that slows down a lot of operations.</td>
<td>Perforce is proven to perform better in daily SCM operations.</td>
</tr>
<tr>
<td><strong>Cost of Ownership</strong></td>
<td>ClearCase is expensive to maintain, both in licenses as well as the required specialized workforce for administration.</td>
<td>Perforce costs less and requires significantly less manpower to administrate and support.</td>
</tr>
<tr>
<td><strong>Productivity</strong></td>
<td>ClearCase is a complex system that requires lots of training and support by administrators.</td>
<td>Perforce is designed to be fast and easy to use. It is easy to maintain with little administrative overhead.</td>
</tr>
<tr>
<td><strong>Central &amp; Distributed Workflow</strong></td>
<td>ClearCase offers only traditional central workflow.</td>
<td>Perforce supports classic central workflow as well as distributed workflow through P4Sandbox and Git Fusion.</td>
</tr>
<tr>
<td><strong>Global Reach</strong></td>
<td>ClearCase MultiSite is pricey and complex to set up and maintain. In practical use, it introduces a high-coordination overhead for separated teams working on the same code base.</td>
<td>Perforce offers Perforce Proxy and full and filtered replication to enable fast global access. Coordination is transparent and easy.</td>
</tr>
<tr>
<td><strong>Investment Protection</strong></td>
<td>ClearCase is only maintained and has not seen any major upgrades in years.</td>
<td>Perforce is being actively developed and evolving.</td>
</tr>
</tbody>
</table>
PERFORMANCE

ClearCase

ClearCase’s multi-version file system (MVFS) presents the user workspace as a separate file system. It requires deep integration into the operating system and consumes a substantial amount of resources on the client machine. Operations such as retrieving many files or projects with large binaries from the central storage take considerable time.

Perforce

Perforce is proven to perform better in daily SCM operations:
- 5-10 times faster when operating on a project with ~20,000 source code files
- 5-20 times faster when operating on a project with ~3.3 GB binary data

<table>
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<tr>
<th>Operation</th>
<th>ClearCase</th>
<th>Perforce</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial Import</td>
<td>45,524</td>
<td>1,281</td>
</tr>
<tr>
<td>Adding files</td>
<td>142</td>
<td>17</td>
</tr>
<tr>
<td>Editing 200 files</td>
<td>338</td>
<td>7</td>
</tr>
<tr>
<td>Merging</td>
<td>338</td>
<td>7</td>
</tr>
</tbody>
</table>

Figure 1: Workspace 16k files, 3 GB (all times in seconds)

Why Should I Care?

Slow SCM operations cut down productivity and frustrate developers, who will either lose interest or try to circumvent the SCM system. Your developers need a version control system that works with the users, not against them.
COST OF OWNERSHIP

ClearCase

ClearCase is expensive to purchase and support. It is even more expensive with respect to required hardware and the administrative overhead.

It is not uncommon to have 1 administrator for 25 to 50 users, and ClearCase administrators demand a high price for their specialized skills because ClearCase is complex to master.

Perforce

Perforce licensing and maintenance fees are lower than those of ClearCase. A Perforce Server requires less expensive hardware than the equivalent ClearCase server, and client hardware requirements are much lower.

Perforce can be administered by a small group of administrators, even for thousands of users.

Why Should I Care?
Companies are always aiming to reduce their cost base. Perforce offers a powerful modern alternative to ClearCase and it is cheaper to maintain. The highest cost of ClearCase is lost productivity due to complexity and slow performance.
PRODUCTIVITY

ClearCase
ClearCase is a complex system that requires extensive training and support by administrators.
Complex workflow requires UCM on top of ClearCase, which is even more complex and expensive.

Perforce
Perforce is simpler, reducing the need for extensive training. It is designed to be fast and easy to use. Perforce is easy to maintain with little administrative overhead.
Perforce Streams simplify code line management without further cost or administrative overhead.

Why Should I Care?
Developers prefer simple yet powerful tools that allow them to concentrate on coding, not managing the repositories.

CENTRAL & DISTRIBUTED WORKFLOW

ClearCase
ClearCase by itself offers only the traditional central workflow, which requires a permanent connection with the central server because of its network file system.

Perforce
Besides the traditional central workflow, Perforce provides P4Sandbox to allow Perforce users to work offline while still being able to use all Perforce tools and interfaces.
Perforce Git Fusion permits dedicated Git developers to use the full capabilities of Git while under the covers still pushing to the central Perforce repository, offering the best of both worlds.

Why Should I Care?
Although a traditional central server offers many benefits such as closer collaboration, there is a growing trend to be able to work while disconnected. Sometimes the developer is on the move and unable to access the company network. More importantly, distributed version control allows developers to quickly create local branches without affecting the size of the central repository. In the end, work still needs to be stored in the central repository for sharing, reviewing, and continuous integration.
GLOBAL REACH

Why Should I Care?
Companies store their IP in their SCM system and need to make sure it is maintained and evolves continuously according to industry best practices.

INVESTMENT PROTECTION

ClearCase
IBM has not updated ClearCase since 2011 and is encouraging customers to move to RTC without providing an upgrade path.

Perforce
Perforce maintains and continuously evolves its products to ensure that its customers benefit from the latest technologies and industry trends.

Why Should I Care?
Companies store their IP in their SCM system and need to make sure it is maintained and evolves continuously according to industry best practices.

GLOBAL REACH

ClearCase
ClearCase offers MultiSite as its solution for remote offices. MultiSite must be purchased separately and requires considerable effort to administrate and maintain. If separate teams are collaborating on the same code base, then in practice there can be a significant overhead caused by replication. (One customer reported variations from 20 minutes to several hours to replicate between New York and London, causing major overhead; the uncertainty was also a huge drain.)

Perforce
Perforce provides its easy-to-install and virtually maintenance-free Proxy solution for small remote offices and a flexible replication solution for larger offices at no extra cost. It works transparently, simply, and effectively.

Why Should I Care?
Many development teams are going global, with users accessing and submitting to repositories from all over the world 24 hours a day. Without proper caching or replication technology, remote teams suffer from latency and bandwidth saturation, which severely limits their productivity.

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CONCLUSION

ClearCase is a legacy system that incurs large costs due to high licensing and support fees, administrative overhead, and lost productivity. Many companies have migrated from ClearCase to Perforce and repaid their initial investment within a short time thanks to faster delivery of their products and lower operating costs.

We invite you to try Perforce for free (for up to 20 users) at www.perforce.com.