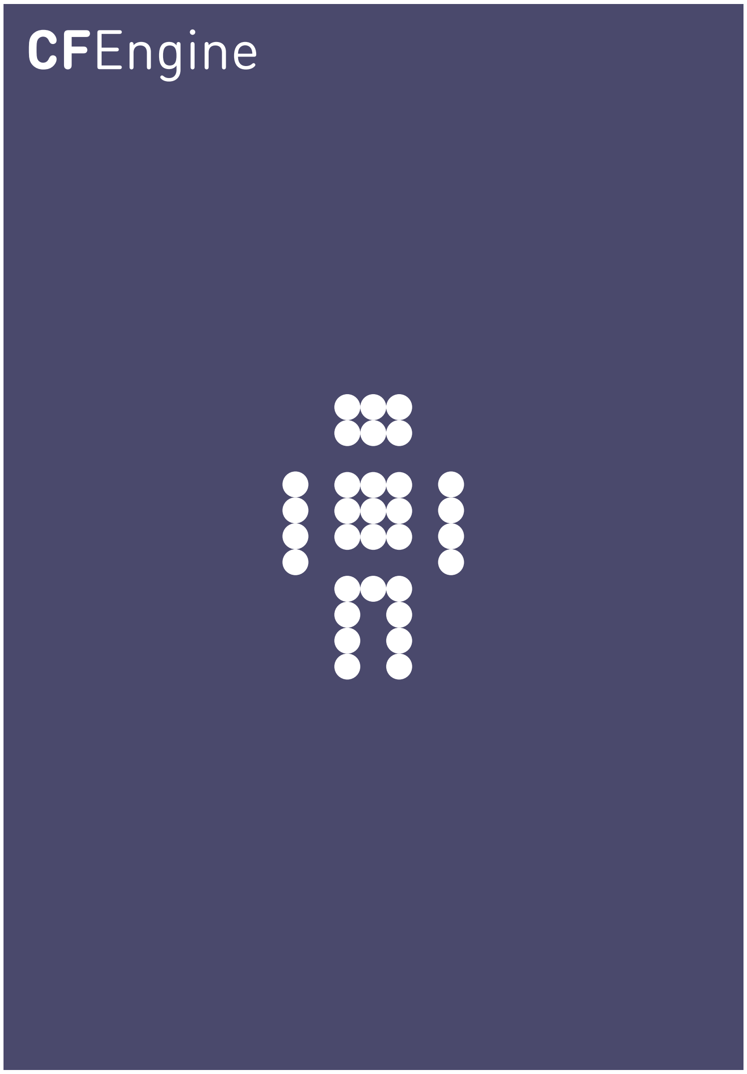

Adopting CFEngine in Your Organization

A CFEngine Special Topics Handbook

CFEngine AS

CFEngine is a framework and a methodology with far reaching implications for the way you do IT management. The CFEngine approach asks you to think in terms of *promises* and *cooperation* between parts; it automates repair and maintenance processes and provides simple integrated Knowledge Management.

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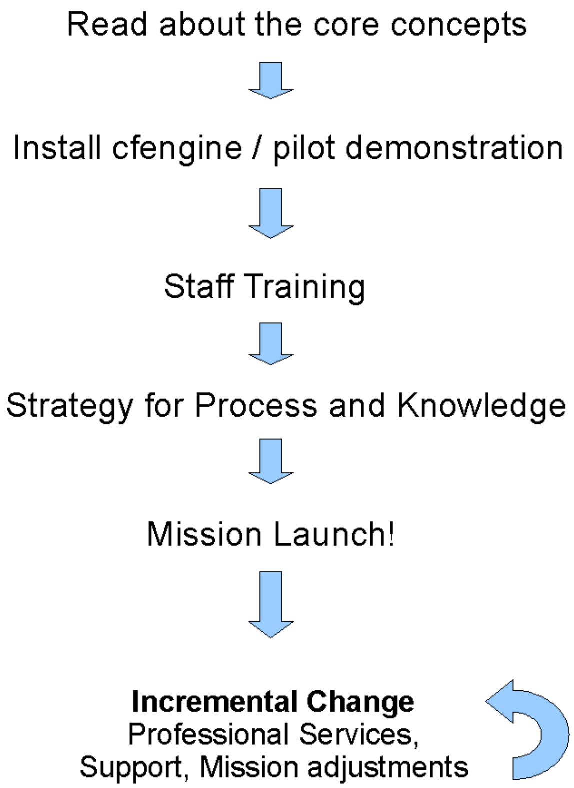
What does adoption involve?

CFEngine is a framework and a methodology with far reaching implications for the way you do IT management. The CFEngine approach asks you to think in terms of *promises* and *cooperation* between parts; it automates repair and maintenance processes and provides simple integrated Knowledge Management.

To use CFEngine effectively, you should spend a little time learning about the approach to management, as this will save you a lot of time and effort in the long run.

The Mission Plan

At CFEngine, we refer to the management of your datacentre as 'The Mission'. The diagram below shows the main steps in preparing mission control. Some training is recommended, and as much planning as you can manage in advance. Once a mission is underway, you should expect to work by making small corrections to the mission plan, rather than large risky changes.


Read about the core concepts
Install cfengine / pilot demonstration
Staff Training
Strategy for Process and Knowledge
Mission Launch!
Incremental Change
Professional Services,
Support, Mission adjustments

Planning does not mean sitting around a table, or in front of a whiteboard. Successful planning is a dialogue between theory and practice. It should include test pilots and proof-of-concept implementations.

Commercial or Free?

The first decision you should make is whether you will choose a route of commercial assistance or manage entirely on your own. You can choose different levels of assistance, from just training, to consulting, to commercial versions of the software that simplify certain processes and offer extended features.

At the very minimum, we recommend that you take a training course on CFEngine. Users who don't train often end up using only a fraction of the software's potential, and in a sub-optimal way. Think of this as an investment in your future.

The advantages of the commercial products include greatly simplified set up procedures, continuous monitoring and automatic knowledge integration. See the CFEngine Nova Supplement for more information.

Installation or Pilot

You are free to download Community Editions of CFEngine at any time to test the software. There is a considerable amount of documentation and example policy available on the cfengine.com web-site to try some simple examples of system management.

If you intend to purchase a significant number of commercial licenses for CFEngine software, you can request a pilot process, during which a specialist will install and demonstrate the commercial edition on site.

Identifying the Team

CFEngine will become a core discipline in your organization, taking you from reactive fire-fighting to proactive and strategic practices. You should invest in a team that embraces its methods. The CFEngine team will become the enabler of business agility, security, reliability and standardization.

The CFEngine team needs to have administrator or super-user access to systems, and it needs the ‘headroom’ or ‘slack’ to think strategically. It needs to build up processes and workflows that address quality assurance and minimize the risk of change.

All teams are important centres for knowledge, and you should provide incentives to keep the core team strong and in constant dialogue with your organization's strategic leadership. Treat your CFEngine team as a trusted partner in business.

Training and Certification

Once you have tried the simplest examples using CFEngine, we recommend at least three days of in-depth training. We can also arrange more in-depth training to qualify as a CFEngine Mission Specialist.

Mission Goal and Knowledge Management

The main aim of Knowledge Management is to learn from experience, and use the accumulated learning to improve the predictability of workflow processes. During every mission, there will be unexpected events, and an effective team will use knowledge of past and present to respond to these unpredictable changes with confidence

The goal of an IT mission is a *predictable operational state* that lives up to specific policy-determined promises. You need to work out what this desired state should be before you can achieve it. No one knows this exactly in advance, and most organizations will change course over time. However, with good planning and understanding of the mission, such adjustments to policy can be small and regular.

Many small changes are less risky than few large changes, and the culture of agility keeps everyone on their toes. Using CFEngine to run your mission, you will learn to work pro-actively, adjusting the system by refining the mission goal rather than reacting to unexpected events.

To work consistently and predictably, even when understaffed, requires a strategy for describing system resources, policy and state. CFEngine can help with all of these. See the Special Topics Guide on Knowledge Management.

A major component of a successful mission, is documenting *intentions*. What is the goal, and how does it break down into concrete, achievable states? CFEngine can help you in this process, with training and Professional Services, but you must establish a culture of commitment to the mission and learn how to express these commitments in terms of CFEngine *promises*.

Build, Deploy, Manage, Audit

The four mission phases are sometimes referred to as

Build A mission is based on decisions and resources that need to be put assembled or 'built' before they can be applied. This is the planning phase.

In CFEngine, what you build is a template of proposed promises for the machines in an organization such that, if the machines all make and keep these promises, the system will function seamlessly as planned. This is how it works in a human organization, and this is how is works for computers too.

Deploy Deploying really means launching the policy into production. In CFEngine you simply publish your policy (in CFEngine parlance these are 'promise proposals') and the machines see the new proposals and can adjust accordingly. Each machine runs an agent that is capable of keeping the system on course and maintaining it over time without further assistance.

Manage Once a decision is made, unplanned events will occur. Such incidents traditionally set off alarms and humans rush to make new transactions to repair them. Under CFEngine guidance, the autonomous agent manages the system, and humans only manage knowledge and have to deal with rare events that cannot be dealt with automatically.

Audit CFEngine performs continuous analysis and correction, and commercial editions generate explicit reports on mission status. Users can sit back and examine these reports to check mission progress, or examine the current state in relation to the knowledge map for the mission.

Contact CFEngine

Contact CFEngine today for more information: `contact@CFEngine.com`.